LIBRARY—COLLEGE PARK

Withdrawn

THE

MARYLAND

AGRICULTURAL COLLEGE

COLLEGE PARK, MARYLAND

1856 1908

CATALOGUE

1908-9

LIBRARY—COLLEGE PARK

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Maryland. University

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*Died February 11, 1908.

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*Died January 20, 1908.
†Appointed February 20, 1908.

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CALENDAR.

1908.

THIRD TERM.

Monday, March 16th—Third Term Begins.
Wednesday, April 15th, noon, to Tuesday, April 21st, 1 P. M.—Easter Recess.
Thursday, May 15th—Submitting of Theses.
Sunday, June 7th—Baccalaureate Sermon.
Monday, June 8th—Class Day.
Tuesday, June 9th—Alumni Day.
Wednesday, June 10th, 11 A. M.—Commencement Day Exercises.

1908-1909.

FIRST TERM.

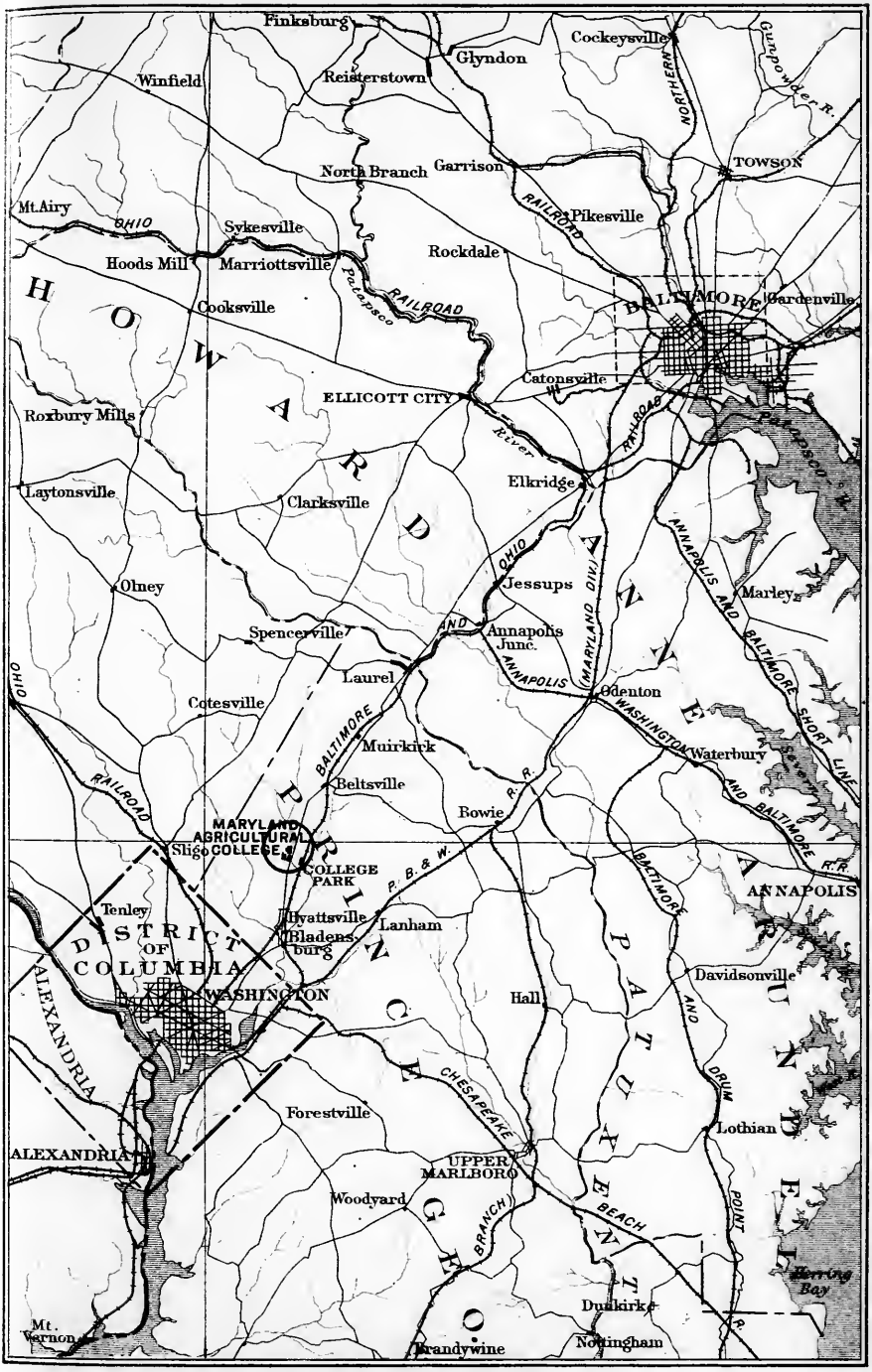
Tuesday, September 15th, and Wednesday, September 16th—Entrance Examinations.
Thursday, September 17th, 1 P. M.—College Work Begins.
Friday, December 18th, noon—First Term Ends.
Friday, December 18th, noon, to Monday, January 4th, noon—Christmas Recess.

SECOND TERM.

Monday, January 4th, noon—Second Term Begins.
Tuesday, January 5th—Special Winter Course in Agriculture Begins.
Monday, February 1st—Filing Subjects of Theses.
Friday, March 19th—Second Term and Special Winter Course in Agriculture End.

THIRD TERM.

Monday, March 22nd—Third Term Begins.
Wednesday, April 7th, noon, to Tuesday, April 13th, 1 P. M.—Easter Recess.
Monday, May 17th—Submitting of Theses.
Sunday, June 13th—Baccalaureate Sermon.
Monday, June 14th—Class Day.
Tuesday, June 15th—Alumni Day.
Wednesday, June 16th, 11 A. M.—Commencement Day Exercises.



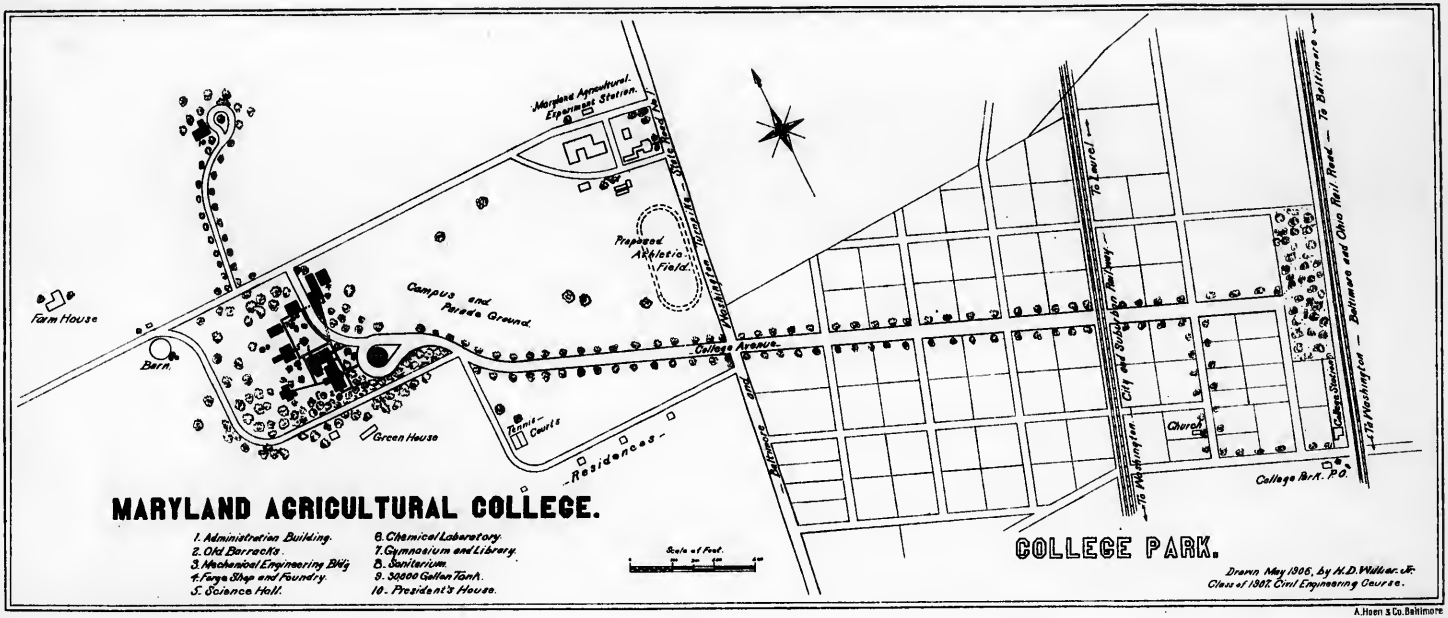
MAP SHOWING LOCATION OF

MARYLAND AGRICULTURAL COLLEGE.

A. Hoen & Co. Baltimore

8 7 6 5 4 3 2 1 0 8

8 miles = one inch



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MARYLAND AGRICULTURAL COLLEGE.

HISTORY.

An act to establish and endow an agricultural college in the State of Maryland was passed by the legislature of the State in 1856 (see Laws of Maryland 1856, Chapter 97). At that time no other institution of a similar character existed in the United States. Its express purpose was defined to be, "To instruct the youthful student in those arts and sciences indispensable to successful agricultural pursuit." Under the charter thus granted to a party of public-spirited private individuals, the original College building was erected, and its doors were opened to students in the fall of 1859.

For three years it was conducted as a private institution, but in 1862 the Congress of the United States, recognizing the valuable work in the cause of practical education which such colleges could achieve for the country, passed the "Land Grant Act." This Act granted each State and Territory which should claim its benefit a proportionate amount of unclaimed Western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the establishment and maintenance of at least one college in which the "leading object" should be, "without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States" might "respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant having been formally accepted by the General Assembly of Maryland, and the Maryland Agricultural College being named as the beneficiary of the grant, the College thus became, in part, at least, a State institution, and such it is at the present time.

In 1892 the Federal Government passed a second act for the benefit of the agricultural and mechanical colleges. By the act of Congress of that year an annual appropriation of $15,000, to be increased by $1,000 each year until the sum of $25,000 should be reached, was granted each State, to be applied to the further equip-

ment and support of these colleges. The primary object of this legislation was the development of the departments of agriculture and the mechanic arts, and the branches kindred thereto. Maryland, in order to comply with the terms of the Act of Congress, divided this fund between the State Agricultural College and a somewhat similar institution for the education of colored students located at Princess Anne, on the Eastern Shore of Maryland.

In 1887 the Federal Congress passed an important act in aid of the agricultural interests, appropriating $15,000 a year in each State and Territory for the establishment and maintenance of agricultural experiment stations. The Maryland Station was located on the College farm, and was made a department of the College. In 1892 the Board of Trustees so far separated it from the College as to put it under a special Director, who is immediately responsible to the Board. The function of the Experiment Station is the investigation of those agricultural problems of most interest and concern to the farmers of the State, and the publication and dissemination of the results of such experiments in the form of bulletins, for the information and guidance of those interested in agriculture. Since the organization of the Experiment Station, its influence has steadily increased, and its sphere of usefulness has constantly widened, until it is now a well recognized factor in the agricultural development of Maryland.

In 1906 Congress passed the Adams Bill, a measure of further assistance for the experiment stations of the several States. By this act there is granted a gradual increasing appropriation for the experimental work of the stations, until such grant shall equal $15,000 per annum.

During the last twelve years the College has made a steady growth. This fact is evidenced by the increased number of students availing themselves of its facilities; by the erection of many new buildings—the library and gymnasium building, the chemical laboratory, the mechanical engineering building, Morrill Hall, the college barn, the sanitarium and the new administration building and barracks, as well as by the establishment of the Department of Farmers' Institutes and the State Departments of Horticulture, Entomology and Vegetable Pathology, and of Chemistry (Fertilizer and Feed Control). Under such favorable auspices the institution has con-

tinued to grow, and has become the most important factor in the agricultural and industrial development of the State.

The State Bureau of Forestry, recently created, cooperates with the College, the Director being, by the terms of his appointment, Lecturer on Forestry at the Agricultural College.

LOCATION AND DESCRIPTION.

The Maryland Agricultural College is located in Prince George County, Maryland, on the line of the Washington Branch of the B. & O. R. R., eight miles from Washington, and thirty-two miles from Baltimore. At least nine trains a day from each city stop at College Station, thus making the place easily accessible from all parts of the State. Hyattsville is the telegraph station. Telephone connection is made with the Chesapeake and Potomac lines.

The College grounds front on the Baltimore and Washington turnpike. The suburban town of Hyattsville is two and one-half miles to the south, and Laurel, the largest town in the county, is thirteen miles to the north on the same road. Connection with these towns and with Washington may be had by steam and electric railway. The site of the College is particularly beautiful. The buildings occupy the crest of a commanding hill, covered with forest trees, and overlooking the entire surrounding country. In front, extending to the turnpike, is a broad, rolling campus, the drill ground and athletic field of the students. In the rear are the farm buildings and barn. A quarter of a mile to the northeast are the buildings of the Experiment Station. The College farm contains about three hundred acres, and is devoted to gardens, orchards, vineyard, poultry yards, etc., all used for experimental purposes.

The general appearance of the College grounds is exceedingly attractive. They are tastefully laid off in lawn and terraces, with ornamental shrubbery and flower beds, and the view from the grove and campus cannot be surpassed.

The location of the College is healthful; the sanitary conditions are excellent. No better proof of this can be given than that there has been no really serious case of illness among the students for ten years.

COLLEGE BUILDINGS.

The original barracks is a five-story brick building, containing the student quarters and the Domestic Department. The dormitories are large, well ventilated and provided with fire escapes, bath and water rooms. All the buildings are lighted by gas and electricity and heated by steam from the central plant on the College grounds.

In 1894 the building used as the gymnasium and library was erected. The gymnasium, on the ground floor, is well furnished with modern athletic appliances. The library and reading room is on the second floor, and is large, well-lighted and convenient for the purpose.

The Mechanical Engineering Department is located in a two-story brick building, completed in 1896, and now thoroughly equipped. It contains workshops for woodwork, machinery rooms well furnished with modern equipment, a drawing room, library and office, together with a large annex, designed to afford additional facilities in forging and foundry work, which was erected and equipped during 1904. It is a model building of its kind.

The chemical building was completed in 1897, and is now thoroughly equipped. It contains several lecture rooms, laboratories for practical work and for the analysis of fertilizers and feeding material for domestic animals. This work is assigned by an Act of the General Assembly to the Professor of Chemistry at this College, who is thus the State Chemist.

Another addition to the group of College buildings is Morrill Hall, erected in 1898. This building provides ample accommodations for the Departments of Agriculture, Horticulture, Physics, Entomology, Vegetable Pathology and Veterinary Science, thus relieving the pressure of close quarters from which these departments had suffered, and greatly extending their opportunities for the development of high-grade scientific work. A greenhouse for work in entomology and vegetable pathology was erected in 1904.

The College Sanitarium, completed in 1901, has proved a most efficient means of isolating infectious disease which might otherwise have become epidemic, thus seriously embarrassing College work. It contains ample room for all emergencies, and is furnished with modern hospital facilities. An experienced nurse is in constant

attendance, and the College surgeon is present every morning at a fixed hour to prescribe for any cadet requiring his services.

Appreciating the needs of the institution, the State Legislature has from time to time appropriated funds wherewith buildings could be erected or renovated and equipment secured.

Among recent improvements are the dormitories, accommodating twice the number of students, an auditorium and offices in the Administration Building, added in 1904; a complete renovation of the original College barracks; a modern steam heating plant; gas and electric lighting; lavatories; forced ventilation, etc., all of which furnish quarters and class-rooms with unusually good sanitary arrangements.

Under the provisions of the acts of the last State Legislature a modern steam laundry has been added to the equipment, and other needed improvements will be secured as required.

GENERAL AIM AND PURPOSE.

The Agricultural College is the State school of science and technology. While seeking, first of all, to perform the functions of an agricultural college, its sphere of work has been widened to embrace all the sciences akin to agriculture, and all the arts related to mechanical training. To these special and prominent lines of work have been added such branches of study as are necessary for a liberal education, for the development of the intelligent citizen and the making of general culture. The purpose of this college is to give to young men anxious to prepare themselves for the active duties of life such training in the sciences or in the mechanical workshop as will enable them to take their places in the industrial world well prepared for the fierce competition of the day.

Recognizing that such an education, in order to be of practical advantage to many, must be offered at a cost within the means of all, the expenses for the year to the student have been reduced to the point where his college dues are not in excess of his ordinary daily expenses. It is to be remembered that the College is a State institution, in part supported by the State, in part by the Federal Government, through its several endowment Acts, and that it is in no sense a money-making institution, but simply a medium of dis-

bursement by the Government to those classes upon whom the safety and prosperity of the State so largely depend.

While the College provides, as will hereinafter be explained, several distinct courses of instruction looking to the special training of the student in agriculture, mechanical engineering and the natural and physical sciences, the fact is clearly kept in view that a sound foundation must be laid for each and every course. Successful specialization is only possible after the student has prepared for it by a thorough training in the essentials. All education must be narrow and one-sided which does not provide for the general culture of the student, and which does not look first to the natural and normal development of the individual. The general working plan of the College may be thus described:

It begins with the student in his first, or Freshman, year with a systematic and carefully adjusted scheme of work, differing but little in the several courses, and looking to his general development in mental strength, range of information and power of expression and thought. At the beginning of his second, or Sophomore, year the differentiation may be said to begin along those lines in which he shows most natural aptitude. This gradual specialization continues during his third, or Junior, year, until in his last, or Senior, year, his work consists wholly of a few closely connected topics, in which he is thus able thoroughly to prepare himself. With the present equipment of the laboratory and mechanical work-shops a student is able to become so proficient in his chosen line of work that when he leaves the College a successful career is open to him if he chooses to avail himself of it.

The Agricultural College is, legitimately, the crowning point of the public school system of Maryland. Its aim is to provide a higher education for the graduates of the county schools. To this end its curriculum is adjusted to meet the preparation of such students. It is this class of young men that the College is especially desirous of reaching. Experience has shown that our most satisfactory students come as graduates from the county schools, and no efforts will be spared to make the transition from the high school or grammar school to the College a possible one for all those actuated by an earnest desire to complete their education.

DEPARTMENTS OF THE COLLEGE.

AGRICULTURE—
  AGRONOMY.
  ANIMAL HUSBANDRY.
BOTANY AND VEGETABLE PATHOLOGY.
CHEMISTRY.
CIVIL ENGINEERING.
ELECTRICAL ENGINEERING AND PHYSICS.
ENGLISH AND CIVICS.
ENTOMOLOGY AND ZOOLOGY.
HORTICULTURE—
  HORTICULTURE.
  FORESTRY.
LANGUAGES.
MATHEMATICS.
MECHANICAL ENGINEERING.
MILITARY SCIENCE.
ORATORY.
PHYSICAL CULTURE.
PREPARATORY.
VETERINARY SCIENCE.

The following pages give, under the several departments, the general character of the courses offered by each, and the main features of their equipment.

DEPARTMENT OF AGRICULTURE.

W. T. L. TALIAFERRO, PROFESSOR.

B. E. PORTER, ASSISTANT PROFESSOR.

The Agricultural Department offers three courses:

I. A four-year course leading to the degree of B. S.

II. A two-year course, for proficiency in which a certificate is awarded.

III. A ten-week winter course, for which credit is given toward the two-year or four-year course.

Education is transforming the farms into veritable workshops, whose products, in the aggregate, more than equal those of any other industry of the country, and under the influence of more general intelligence are capable of indefinite extension. In this work there is need of the trained investigator to discover the natural laws which underlie the phenomena of plant and animal life, and there is also need of educated farmers with skill and intelligence to receive these principles and apply them in practical farming.

These courses are so arranged as to furnish a good foundation upon which the student may build a successful career as a farmer, or develop into a specialist along some line pertaining to the farming industry. The studies to be pursued are recognized as being necessary to fully equip the student for the highest order of work, and for the greatest usefulness.

The College farm consists of two hundred and sixty-five acres of land, which is operated by the Maryland Experiment Station. Students of the agricultural course are made acquainted with the work of the Station from time to time, and because of the College and Station's close association an excellent opportunity is afforded the student to study the cultivation and growing of crops, the application of manures and fertilizers, the care of stock, the selection of seed from growing crops, the judging of the several classes of animals, and all the work of the practical farmer.

LECTURE COURSE.

This course runs through the four years, and consists of a series of lectures on agricultural topics, delivered once a week at the College by specialists from the United States Department of Agriculture and elsewhere. This course is a new departure, and it is believed, a most important one. The weekly presentation of agricultural topics by new and attractive speakers cannot fail to produce an excellent effect not only by its educational features, but by exciting among the students a livelier interest in agricultural work through contact with men of prominence in the profession.

Students taking the Agricultural, Horticultural, Chemical or General Science courses are required to attend these lectures. With other students, attendance is optional.

DIVISION OF AGRONOMY.

The division of Agronomy takes up the agricultural work pertaining to the field and its crops. A number of courses are offered. These treat of farm crops, their classification, adaptation to soil and climate and methods of culture; soils, their properties, and how to care for them and make them more productive and fertile by crop rotation, and by the application of manures and fertilizers; farm management, how to make the farm a source of pleasure and profit by employing economic business principles and practices; farm machinery, the kind of tools to use for preparing the land, cultivating and harvesting the crops. A new soil laboratory has been added to this department. In this laboratory the student has an excellent opportunity to study the physical properties of the different kinds of soil. A separate desk and ample apparatus is provided each student to perform experiments for himself.

COURSES OFFERED.

I. Farm Crops. In this course the production of farm crops is considered in detail as to history, uses and requirements, local adaptations, varieties, fertilization, cultivation and harvesting. A special feature is the study of crop improvement by breeding and selection. Very much of this work is of a practical nature in the laboratory or on the farm.

In order to make this a more practical course it is divided into two parts, the first part being given in the spring term and the latter part in the fall term. This division enables the student to take up the various phases of the work in their appropriate seasons.

The texts used are Morrow and Hunt's "Soils and Crops," Shaw's "The Cereals In America," Shamel's "Corn Judging."

Sophomore Year, Third Term; three theoretical and four practical periods per week. Junior Year, Second Term; two theoretical and two practical periods per week; Third Term, two theoretical and four practical periods per week.

II. Soils. The study of the physical and chemical conditions of the soil in their relation to profitable agriculture. The soil is the basis of all agriculture, and a knowledge of its properties and functions cannot be too highly emphasized. The study of this important subject is conducted by means of lectures, text-books, laboratory and field work. No State in the Union possesses a greater variety of soils than Maryland, and great attention is paid to the study of soil types in their relation to profitable agriculture.

A well equipped soil laboratory and the wide variety of soils found on the College farm offer exceptional advantages in the theoretical and practical study of this important subject.

The text-book used is "The Soil," by King.

Junior Year, First Term; 2 theoretical and 2 practical periods per week; first half, Third Term; 3 theoretical and 4 practical periods per week.

III. Farm Drainage. Practical work in open ditching and under drains is provided for the students, on the Experiment Station farm. Special attention is given to the principles and practice of tile drainage.

The text-book used in this course is Waring's "Drainage for Profit and Health."

Junior Year, Third Term; 2 theoretical and 2 practical periods per week.

IV. Plant Production. This course is intended for those students only who are specializing in agronomy. It consists of field

and laboratory work in the study of the handling of fall sown and fall harvested crops. Great attention is given in this course to a careful note-taking and study of the results obtained in breeding work in corn and other fall maturing crops on the Experiment Station farm.

Senior Year, First Term; 3 theoretical and 4 practical periods per week.

V. Fertilizers. Of vital interest to the eastern and southern farmer of the present day, is the fertilizer question. Between it and the profit and loss account is a very close connection, and frequently a lack of knowledge of the subject entails upon the farmer both the loss of money paid and of the possible increase of the crop. In this course the subject is developed logically from the needs of the plant and the efficiency of the soil to the selecting of the proper plant foods for each crop under varying conditions of soil and climate. Special attention is given to the home mixing of fertilizers.

Senior Year, Second Term; 3 theoretical and 4 practical periods per week.

VI. Farm Machinery. Lectures and practical work.

Senior Year, Third Term; 2 theoretical and 4 practical periods per week.

VII. Farm Management. Lectures.

Senior Year, Third Term; 2 periods per week.

VIII. Advanced Work in Crop Production.

Senior Year, Third Term; 2 theoretical and 4 practical periods per week.

IX. Advanced Work in Soils. Senior Year, Third Term; 2 theoretical and 4 practical periods per week.

X. Thesis and Research Work. To be arranged for with the head of the department.

Senior Year, Second and Third Terms; 2 theoretical and 4 practical periods per week.

GEOLOGY.

I. Attention is given chiefly to physical geology. The latter half of the second term is devoted to the geology of Maryland, especially as affecting the character of the soils, mineral wealth and other economic conditions of the State. Instruction is given by means of text-book work, lectures and field excursions.

Shaler's "First Book in Geology" is used as a text-book. The reports of the Maryland Geological Survey are used for reference.

Freshman Year, First Term; 4 periods per week; Second Term; five periods per week.

DIVISION OF ANIMAL HUSBANDRY.

The division of Animal Husbandry stands for all lines of work which pertain to the judging, selecting, breeding, feeding, development, care and management of the various breeds and classes of domesticated animals. Good herds of stock are being established at the Maryland Agricultural Experiment Station which are of use to the student in his studies. In addition to the supply of stock on the farm the proximity of the College to Washington, Baltimore and the Government Quarantine Station, near Baltimore, makes it possible for the student to get excellent material for study. The Heurich dairy farm, close by, furnishes an excellent example in dairy farming. It is quite evident that there is but one way to make a young man a proficient judge of livestock, and that is by training the eye. In all of the lecture and laboratory work outlined in the courses the work is demonstrated with living specimens.

New dairy barns are erected at the Experiment Station. These are models of sanitation. A class-room for judging live stock is being planned for occupancy in the near future.

A growing library of herd-books is available to the student of pedigrees. These books give a fund of information concerning heredity, fecundity, and other breed characteristics.

COURSES OFFERED.

I. Breeds and Scoring. This course is devoted to the detailed study of the breeds of live stock. The practical work commences with a study of the animal form by the use of the score-card. Especial attention is given to the relation of form to function. First, the productive types are firmly fixed in the student's mind; then he takes up more particularly breed characteristics. Judging occupies two double periods two afternoons per week.

Text-books in use are "Types and Breeds of Farm Animals," by Plumb, and "Judging Live Stock," by Craig.

Junior Year, First Term; 3 theoretical and 4 practical periods per week.

II. Principles of Breeding. This course takes up the principles of breeding, including selection, heredity, atavism, variation, fecundity, in-and-in breeding, cross breeding and a historical study of their results.

Text-book: "Stock Breeding," Miles.

Junior Year, First Term; 3 theoretical periods per week.

III. Livestock Management. Lectures are given on the housing, feeding, care and management of dairy cattle, hogs and horses (Second Term). The housing, feeding, care and management of beef cattle and sheep (Third Term). The practical work in the spring term consists of applications of the work in the lectures, and takes up the drawing of barn plans and other stable conveniences.

Junior Year, Second Term; 2 theoretical periods per week; Third Term; 2 theoretical and 2 practical periods per week.

IV. Dairying. Text-books: Wing's "Milk and Its Production," Russell's "Dairy Bacteriology."

Junior Year, Third Term; 3 theoretical and 4 practical periods per week.

V. Stock Judging. Special attention is paid to the judging of groups of animals, similar to county and state fair work.

Senior Year, First Term; 4 practical periods per week.

VI. Herdbook. The herdbooks of the breeds of live stock are studied with a view of becoming acquainted with the pedigrees of the leading families of live stock, and the methods of recording the same. Here advanced work in animal breeding is taken up.

Senior Year, First Term; 2 theoretical and 2 practical periods per week.

VII. Animal Nutrition. This course embraces the principles and practice of animal feeding. After covering the principles of nutrition, it takes up the composition of feeding stuffs, their combination into properly balanced rations, and the relation between the sustenance of animals and their products. Students entering this course should have completed courses in Organic Chemistry and Comparative Anatomy and Physiology.

Text-books: "Feeds and Feeding," Henry; "Feeding of Animals," Jordan.

Senior Year, Second Term; 4 theoretical periods per week. Third Term; 4 theoretical and 4 practical periods per week.

VIII. Profitable Stock Feeding. This course treats of the feeding of animals in a most practical manner. Special attention is given to the feeding of breeding stock and the fattening of animals for market. There is no special requirement to enter this course, as in Course VII.

Text-book: "Profitable Stock Feeding," by H. R. Smith.

Two-year Short Course students, Second Term of Second Year; 4 theoretical periods per week.

IX. Research Work. Upon lines and subjects to be arranged with the department.

The object of this work is to develop independence and originality in the student, and also to give him a taste for personal investigation upon lines which are of particular interest to himself.

Junior Year, Third Term; 2 practical periods per week.

X. Thesis and Research. The investigations already begun in the Junior Year may be pursued throughout the Senior Year. Other work is to be taken up, and may furnish a basis for the thesis. The time given this work will be arranged with the department.

DEPARTMENT OF BOTANY AND VEGETABLE PATHOLOGY.

J. B. S. NORTON, PROFESSOR.
W. R. EASTMAN, ASSISTANT.

The courses in Botany are intended to give such knowledge of the vegetable kingdom as is a proper element in general culture; to train the student mind in observation, comparison, generalization, and other mental processes essential to true scientific methods in any work, and to furnish a basis for practical studies directly connected with agriculture; for since plants are the subjects dealt with in the field and garden, the study of plant life must be one of the fundamental sciences upon which such work is based. In addition to the courses in pure Botany, others of special economic trend are given. These are especially for students in the Agricultural and Horticultural courses, and take up such botanical studies of cultivated plants, plant diseases, etc., as may be useful in practical life to the professional farmer or gardener.

The equipment and means for illustration and demonstration, consist of a reference library containing the principal botanical works needed by students, charts and maps, compound and dissecting miscroscopes, preserved specimens for illustration, a representative collection of Maryland plants; microtome and other instruments, reagents and apparatus for histological work and physiological experiments; a culture room, sterilizers, incubators and other facilities for the study of plant diseases.

Advanced students have opportunity to observe the work being done in the laboratory of Vegetable Pathology and greenhouse of the State Horticultural Department, and, if competent, to assist in the same. Special attention is given to students who wish practice in the treatment of plant diseases, as it is the desire of the Department to encourage young men to engage in this work as a business.

I. General Principles. An elementary course in the general principles of anatomy, morphology and physiology of the higher plants. The structure and types of seed, root, stem, leaves, flower and fruit are studied in the laboratory, with a brief consideration of the functions of the different plant organs, a more complete course in plant physiology (III) being given later. This course is a necessary preparation for Course II.

Bergen and Davis' "Principles of Botany" is the principal text-book used.

Freshman Year, Second Term; 2 theoretical and 4 practical periods per week.

II. Systematic Botany and Ecology. Principally field work with the manual on the native flora, and designed to give a knowledge of the names of the common Maryland plants and their position in the classification of the vegetable kingdom. The ecology of the plants examined in the field is also taken up, considering their relation to soils, water supply, light and other factors in their environment, cross pollination, dissemination of seeds, plant societies, etc. Each student makes a collection of at least fifty plants from some part of the State.

Reference books used: Gray's "Field, Forest and Garden Botany," Britton's "Manual," Gray's "Manual," Britton and Brown's "Illustrated Flora."

Freshman Year, Third Term; 2 theoretical and 4 practical periods per week.

A combination of I and II is given in the First Term of the two-year course in Horticulture, and in the Third Term of the two-year course in Agriculture.

III. Plant Physiology. Lectures and experiments on the life processes of plants; absorption and transfer of water and food materials, photosynthesis, respiration, growth, movement, reproduction, etc., with microscopic studies of the structure of the organs concerned.

Sophomore Year, Second Term; 2 theoretical and 4 practical periods per week.

IV. Plant Histology. Laboratory work with the compound microscope, studying the minute structure of the tissues and organs of the various types of plants. Each student prepares a series of sections for study with the microscope, from which he makes a set of outline drawings.

Steven's "Plant Anatomy" and Chamberlain's "Methods in Plant Histology" are the principal books used.

Junior Year, Second Term; 8 practical periods per week.

V. Comparative Morphology and Classification. A comparative study of the structure and life history of the principal types of plants from the lowest to the highest. The exercises consist principally of lectures and microscopic studies in the laboratory.

Text-book: Bergen and Davis' "Principles of Botany," Part II. The outline of classification of Engler's Syllabus is followed in general.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week; given also in abridged form in First Term.

VI. Economic Plants. Lectures on the names, classification, nativity and uses of the useful and detrimental plants of the world, with field and laboratory studies of the common cultivated plants; given with a view of enabling the student of horticulture or agriculture to know the scientific names and relationship of the plants with which he comes in contact in his chosen work.

Reference works: Bailey's Gray's "Field, Forest and Garden Botany," Bailey's "Encyclopedia of Horticulture," etc.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week.

VII. Mycology. Lectures and laboratory work upon the common forms of fungi, with special reference to enabling the student to recognize those causing plant diseases; and preparatory to VIII.

Text-book: Underwood's "Molds, Mildews and Mushrooms."

Senior Year, First Term; 2 theoretical and 2 practical periods per week.

VIII. Vegetable Pathology. The causes, symptoms and means of control of plant diseases are studied by means of lectures, microscopic work in the laboratory and experiments in infection and treatment in field and greenhouse.

In addition to the lectures numerous reference books are used.

Senior Year, Second Term; 2 theoretical and 4 practical periods per week.

IX. Research. Students selecting Botany as a major in the Senior Year devote one term to a completion of an original study of some botanical subject upon which they prepare their graduation thesis.

Senior Year, Third Term; not less than the equivalent of 10 theoretical periods per week.

X. ELECTIVE courses for students of the General Science Course, or for post-graduate students, are offered in Methods in Plant Pathology, Botanical Microchemistry, Histology of Trees, Seed Testing, Taxonomy or advanced work in any of the undergraduate courses before mentioned.

General Science students in Botany pursue their elective courses in the first and second terms of the Senior Year for not less than the equivalent of 10 theoretical periods per week, and those pursuing Entomology as a major devote the equivalent of 3 theoretical periods per week throughout the year to Botany.

DEPARTMENT OF CHEMISTRY.

DR. H. B. MCDONNELL, PROFESSOR AND STATE CHEMIST.

JEROME J. MORGAN, ASSISTANT PROFESSOR.

R. C. WILEY, G. H. HARDIN, ASSISTANTS IN STATE WORK.

This department is charged with two distinct classes of work: (1) The State fertilizer and food inspection, and (2) the instruction of students. The State work necessitates the publication of the "Quarterly" bulletin, which is usually made up of the results of the analyses of fertilizers or feeding stuffs, and is sent free of charge to all Maryland farmers who apply. Students do no part of the State work, the assistants being invariably college graduates. However, this work serves as a valuable object lesson to the advanced students.

The Chemical Laboratory Building is devoted entirely to chemistry. It is new and, not including basement, is two stories high. On the first floor are the laboratories for the State fertilizer and food control work, office, lecture room and balance room. On the second floor are three laboratories for the use of students—one for each

class—a students' balance room with first-class chemical and assay balances and a supply room. The assay furnaces are in the basement. Each student is provided with a working desk, lockers, reagents and apparatus. Additional apparatus and materials are provided from the supply room, as needed.

The department is provided with a small, but well-selected, library of standard reference books on Chemistry, to which additions are made from time to time.

Instruction in Chemistry is begun with the Sophomore year, four hours per week being devoted to lectures and recitations, and three to four hours to practical work in the laboratory by the student, under the supervision of the instructor. In this way he comes in direct contact with the substances studied, having at hand ample facilities for learning their properties. Special attention is given to the elements and compounds of practical and economic importance, such as the air, water and soil, the elements entering into the composition of plants and animals, the useful metals, etc. The course in the Sophomore year is intended to give the student that practical and theoretical knowledge of elementary chemistry, which is essential in the education of every man, no matter what his vocation. It also serves as a foundation for advanced work in chemistry, if such a course is chosen.

Advanced work in chemistry begins with the Junior year, if the course in chemistry is selected, and the larger part of the student's time is devoted to some branch of theoretical or practical chemistry during the rest of his course, as outlined elsewhere.

The object of the full course in chemistry is to prepare the graduate for positions in agricultural colleges, experiment stations, the United States Department of Agriculture, or in various industries that require the services of trained chemists. The demand for our graduates for such positions is far in excess of the supply.

COURSES OFFERED.

I. General Chemistry. Recitations and practical work in the laboratory, where the student performs the experiments under the direction of the instructors. Qualitative analysis is started in this course.

The text-book is Remsen's "Introduction to the Study of Chemistry."

Sophomore Year, Three Terms; 4 theoretical and 3 to 4 practical periods per week.

II. Elementary Organic Chemistry. A brief outline of the chemistry of the compounds of carbon. This course is preparatory to the more detailed study of Organic Chemistry, which is given later, and at the same time serves to round out the course in General Chemistry for those who pursue the subject no farther.

Text-book: Noyes' "Organic Chemistry."

Junior Year, First Term; 3 periods per week.

III. Qualitative Analysis. Text-book: Seller's "Qualitative Analysis."

Junor Year, First Term; 1 lecture and 12 practical periods per week.

IV. Qualitative Analysis. For students taking Horticultural, Agricultural and General Science Courses.

Text-book: Seller's "Qualitative Analysis."

Junior Year, First Term; 1 lecture and 6 practical periods per week.

V. Inorganic Preparations. The preparation and purification of inorganic compounds, fractional crystallization, etc.

Junior Year, First Term; 4 practical periods per week.

VI. Theoretical Chemistry. A discussion of the fundamental laws and theories of modern Chemistry, with their application in problems.

Text-books: Tilden's "Elements of Chemical Philosophy," and Talbot and Blanchard's "Electrolytic Dissociation Theory."

Junior Year, First Term; 2 periods per week.

VII. Quantitative Analysis. Some of the simpler determinations, so selected as to illustrate the general principles of the subject, are given. Neatness and accuracy are insisted upon in the

laboratory, and in the conference period the chemistry and mathematics of each determination are thoroughly discussed.

Text-book: Lincoln and Walton's "Quantitative Analysis."

Junor Year, Second Term; 1 conference and 12 practical periods per week.

VIII. Quantitative Analysis. For students taking Agricultural and General Science Courses. A brief course illustrating some of the general principles in the quantitative study of Chemistry. In the latter part of the course the Agricultural men are given the option of the analysis of fertilizers, feeds, butter, milk, etc.

Text-book: Lincoln and Walton's "Quantitative Analysis."

Junior Year, Second and Third Terms; 1 conference and 4 practical periods per week. Senior Year, First Term; 4 practical periods per week.

IX. Mineralogy. This is a course in determinative mineralogy. The more important minerals are identified by their more characteristic physical and chemical properties, the blowpipe being an important aid.

Text-book: Brush and Penfield's "Determinative Mineralogy and Blowpipe Analysis."

Junior Year, Second Term; 1 lecture and 4 practical periods per week.

X. Organic Chemistry. Recitations and lectures.

Text-book: Remsen's "Organic Chemistry."

Junior Year, Second and Third Terms; Senior Year, First Term; 3 periods per week.

XI. Organic Preparations. The preparation in the laboratory of some of the typical organic compounds, determination of boiling and melting points, lowering of freezing points by substances in solution, determination of vapor densities, and combustion methods for determination of carbon, hydrogen and nitrogen.

Reference book: Levy's "Organische Praeparate," Remsen's "Organic Chemistry," and Gattermann's "Practical Methods of Organic Chemistry," translated by Schober.

Senior Year, Second Term; 16 practical periods per week.

XII. Volumetric Analysis and Assaying. This course is mostly acidimetry and alkalimetry, the determination of iron, chlorine, silver, etc., by volumetric methods, and the fire assay of gold, silver and lead ores.

Reference books: Sutton's "Volumetric Analysis," and Brown's "Manual of Assaying."

Junior Year, Third Term; 2 lectures and 16 practical periods per week.

XIII. Agricultural Chemistry. The chemistry of soils, fertilizers, plant life, animal life, etc.

Text-book: Engle's "Manual of Agricultural Chemistry."

Senior Year, First Term; 3 periods per week.

XIV. Agricultural Chemical Analysis. This is a thorough course in the analysis of fertilizers and fertilizing materials, feeding stuffs, butter, milk, sugar, starch, etc.

Text-book: "Methods of Analysis of the Association of Official Agricultural Chemists."

Senior Year, First Term; 20 practical periods per week.

XV. Industrial, Physical and Electrolytic Chemistry. This course is intended to broaden the foundation of the student in Chemistry, and the parts of the subjects covered will be selected with special reference to the bearing on Agricultural Chemistry.

Text-books: Blount and Bloxam's "Chemistry of Manufacturing Processes," Jones' "Physical Chemistry," and Smith's "Electrolytic Chemical Analysis."

Senior Year, Second and Third Terms; 6 periods of lectures and recitations, and 4 periods of laboratory work per week of Second Term, and 5 periods, lectures and recitations during the Third Term.

XVI. Research. This will occupy nearly all the student's time in the laboratory. The results will be embodied in the graduating thesis.

Senior Year, Third Term; 20 periods per week.

The hours mentioned for practical work in the laboratory are intended to be a minimum. The best students put in considerably

more time than this, the laboratories being open to advanced students till 5 o'clock in the evenings, and on Saturdays till noon. Energetic students are glad to avail themselves of these opportunities.

DEPARTMENT OF CIVIL ENGINEERING, ELECTRICAL ENGINEERING AND PHYSICS.

THOMAS HARDY TALIAFERRO, PROFESSOR.

MYRON CREESE, INSTRUCTOR.

CIVIL ENGINEERING.

The subjects pertaining to Civil Engineering are arranged with the object of emphasizing the fundamental principles through lectures and recitations in the class-room, supplemented by practical exercises in the field, drafting room, and laboratory. Self-reliance being an essential factor in the success of an engineer, the student is encouraged in every way to develop this habit.

Equipment. In addition to minor engineering instruments, etc., the Department is at present equipped with two surveyor's compasses, two transits, and two levels.

Courses Offered. The subjects outlined, with one exception, constitute a portion of the curriculum of students in the Civil Engineering Course.

I. Elementary Mechanics. The elements of statics dealing with the composition and resolution of forces, moments, couples, simple machines, and the laws of friction. The elements of dynamics, dealing with velocity, acceleration, laws of motion, work, energy, and applications to simple problems.

Sophomore Year, Second Term; 3 periods per week.

II. Architectural Drawing. The drawing of floor plans and elevations. Ornamental lettering and title work. Round writing. Perspective drawing. Architectural details.

Sophomore Year, Second Term; 4 periods per week.

III. Elementary Surveying. This course is intended to meet the needs of students in the Agricultural and Horticultural courses. It includes the use of the compass, transit, and level, one or more methods of land surveying, the plotting and computing of areas, leveling, and topographical surveying.

Texts: Robbin's "Elementary Treatise on Surveying," and Notes.

Sophomore Year, Third Term; 3 periods per week of class-room work and 3 periods per week of field practice.

IV. Surveying. This course includes the use and adjustment of engineering instruments, the methods of land surveying, the plotting and computing of areas, dividing of land, the theory of the stadia, true meridian lines, leveling, topographical surveying, railroad curves and cross sectioning.

Texts: Raymond's "Plane Surveying" and Pence & Ketchum's "Field Manual."

Junior Year, three terms; 3 periods per week of class-room work, and 5 periods per week of field practice, First Term; 3 periods per week of class-room work, and 2 periods per week of field practice, Second Term; 2 periods per week of class-room work, and 4 periods per week of field practice, Third Term.

V. Topographical Drawing. Practice in free-hand lettering, maps, profiles, topography, etc.

Junior Year, three terms; 6 periods per week, First and Second Terms; 4 periods per week, Third Term.

VI. Railway Engineering. Preliminary and location surveys, cross sectioning, calculation of quantities, etc.

Text: Searles' "Field Engineering."

Junior Year, Third Term, and Senior Year, First Term; 2 periods per week.

VII. Bridge and Structural Designing. The complete design and detailing of a steel roof truss and a plate girder. The detailing from standard commercial drawing sheets of floor beams, girders and columns. The complete design of a bridge truss of either the Warren or Pratt type. The stresses are determined by both analytical and graphic methods.

Texts: Merriman and Jacoby's "Stresses," Cooper's "Bridge Specifications," Cambria hand-book, Thompson's "Bridge and Structural Design," Merriman and Jacoby's "Bridge Design."

Senior Year, three terms; 6 periods per week.

VIII. Strength of Materials. Treating of the elasticity and resistance of materials of construction, and the mechanics of beams, columns, and shafts.

Text: Merriman's "Mechanics of Materials."

Senior Year, First Term; 4 periods per week.

IX. Hydraulics. Principles of hydraulics, flow through pipes, water supply, etc.

Text: Merriman's "Hydraulics."

Senior Year, Second Term; 5 periods per week.

X. Highway Engineering. Location, construction, and maintenance of roads.

Texts: Spalding's "Roads and Pavements," and the reports of the Highway Division of the Maryland Geological Survey.

XI. Estimates of Cost. A lecture course on the methods of estimating cost.

Senior Year, Third Term; 1 period per week.

XII. Field Engineering. The necessity for practical work on the part of those desiring to enter upon engineering as a profession is obvious. To meet this condition a number of hours have been scheduled for field work in practical problems relating to engineering. The scheduled hours constitute a minimum, the student being encouraged to give as much more of his time as is possible to problems of this character.

Senior Year, three terms; 8 periods per week, First and Second Terms; 12 periods per week, Third Term.

ELECTRICAL ENGINEERING.

It is essential to the stability of every structure that it should not be erected in too great haste. Therefore, for the session of 1908-1909, it is deemed best to offer the Electrical Engineering Course to no students other than those of the Freshman and Sophomore Classes.

EQUIPMENT. Equipment is being purchased as the funds permit, and will be adequate to the needs.

COURSES OFFERED. In accordance with the policy above stated, only the outline of the subject for the Sophomore Year is given.

I. ELEMENTARY ELECTRICITY. This subject includes: Static electricity, dealing with the phenomena of electricity in its potential form, and the conception of electric potential, quantity, capacity, etc; kinetic electricity, including the study of the fundamental laws and units, as Ohm's Law, Joules' Law, units of current, electromotive force, resistance, etc.; theory of magnetism, with its phenomena and forces; and electro-magnetism, which is the foundation for dynamo electric machine design and construction.

Sophomore Year, Second and Third Terms; 2 periods per week.

PHYSICS.

The physical lecture room and laboratory are located in Morrill Hall, in rooms excellently adapted to the purpose. The department is well supplied with apparatus for lecture room demonstrations and for students' individual laboratory work, and new pieces of apparatus are added to the equipment each year.

I. ELEMENTARY PHYSICS. The course consists of lectures, recitations and experimental demonstrations by the instructor on the mechanics of solids, liquids and gases. The student is required to work a number of problems, and his attention is directed to the practical application of the principles studied.

Text: Carhart & Chute's "High School Physics."

Sophomore Year, First Term; 4 periods per week.

II. PHYSICS. The course begins with a review of mechanics, after which heat, electricity and magnetism, sound and light are taken up successively by lectures, recitations, problems, and demonstrations. A knowledge of the elements of plane trigonometry is required for entrance. The laboratory work consists of a series of experiments, mainly quantitative, designed to illustrate and verify the laws and principles considered in the class-room, and to develop in the student skill in manipulation and accuracy in making precise measurements.

Texts: Ames' "Theory of Physics," and Ames and Bliss' "Manual of Experiments in Physics."

Junior Year, three terms; 4 periods of class-room work and 4 periods of laboratory work per week.

III. PHYSICS. Advanced work will be provided for students who have completed the preceding courses, and who wish to continue the study of physics.

DEPARTMENT OF ENGLISH AND CIVICS.

F. B. BOMBERGER, PROFESSOR.

CHARLES S. RICHARDSON, ASSISTANT PROFESSOR.

This department, as its name implies, covers the work of two distinct courses of instruction. It seeks to prepare the student by systematic training in the history, structure and use of the English language, for the highest development of his mental powers and for the complex duties and relations of life; and, further, to fit him for the active and intelligent exercise of his rights and duties as a man and citizen.

The course in English, of necessity, lies at the base of all other courses of instruction. Clear and comprehensive knowledge of his mother tongue is absolutely necessary to the student in pursuing any line of college work. Nor is this all; for aside from the practical value of the English instruction as an aid to other branches of study, and as a preparation for business and profession, it is to his training in this department, in connection with his study of history and the classics and modern languages, that the student must look for the acquiring of that general culture that has always been the distinguishing mark of the liberally educated man. The English work, which is common to all courses, consists of the study of the structure of the English language, English and American literature, theoretical and practical rhetoric, logic, psychology, critical reading and analysis, and constant exercise in expression, composition and theme writing.

The course in civics is especially designed to prepare young men for the active duties of citizenship. The first year is devoted to the study of general history, followed by the principles of civil government, constitutional history, political economy, with special reference to current, social and industrial problems, and, finally, lectures on the elements of business law.

ENGLISH COURSES.

I. Language and Composition. English language, review of grammar, practical exercise in analysis, synthesis and etymology, composition and letter writing. Work in composition consists of the preparation of twelve themes upon assigned topics.

Texts used: Lockwood's "Lessons in English," Buehler's "Exercises in English," and Swinton's "Word Analysis."

Freshman Year, three terms; 5 periods per week.

II. American Literature. A study of the most important writers, with a view to giving the student an exact knowledge of their works.

Text used: Watkin's "American Literature."

Freshman Year, Third Term; 3 periods per week.

III. American Literature. Advanced study of selected works of American authors.

Sophomore Year, Third Term; 4 periods per week.

IV. Rhetoric and Composition. Principles and practice of rhetoric and composition. Work in rhetoric consists of a study of the principles of diction, the sentence, the paragraph, the discourse, forms of prose, and the nature, form and structure of poetry.

Work in composition consists of twelve themes, illustrating special processes.

Text used: Brooks and Hubbard's "Composition-Rhetoric."

Sophomore Year, First and Second Terms; 4 periods per week.

V. English Literature. General study of the history and chief writers of English literature.

Text used: Stopford's Brooke's "English Literature."

Sophomore Year, Third Term; 3 periods per week.

VI. Composition. Practice in English Composition. Special lectures. Work in composition consists of twelve themes discussing English classics studied in class, or subjects involved in the study of civics. Special attention is paid to the oration and short story during the Third Term.

Junior Year, three terms; 1 period per week.

VII. English Literature. Advanced study of selected works of English authors.

Texts used: Pancoast's "English Literature," Halleck's "English" and Taine's "English Literature."

Junior Year, First Term; 3 periods per week; Second Term, 2 periods per week.

VIII. Logic. Principles and practice of logic.

Text used: Jevon's Hill's "Logic."

Junior Year, Third Term; 3 periods per week.

IX. English Classics. Critical study of English classics.

Senior Year, three terms; 4 periods per week.

X. Psychology. Principles of Psychology. Text-book and lectures.

Text used: Dewey's "Psychology."

Senior Year, First Term; 4 periods per week.

XI. Composition. Advanced work in English Composition. Special lectures. Eight themes illustrating special processes.

Senior Year, three terms; 1 period per week.

HISTORY COURSES.

I. General History. Outlines of general history.

Text used: Fisher's "Brief History of the Nations."

Freshman Year, First and Second Terms; 4 periods per week.

II. English History. Study of the outlines of English history.

Text used: Montgomery's "English History."

Freshman Year, Third Term; 4 periods per week.

III. Current Topics. Seminar discussion of current social, industrial, political and economic events.

Senior Year, Third Term; 2 periods per week.

CIVICS COURSES.

I. Civics. Civil Government in the United States.

Texts used: Fiske's "Civil Government," Hindsdale's "American Government" and Clark's "Outline of Civics."

Junior Year, Second and Third Terms; 3 periods per week.

II. Political Economy. Principles of political economy and industrial development of the United States, economic science and current problems.

Text used: Walker's "Political Economy."

Senior Year, First and Second Terms; 3 and 4 periods per week.

III. Business Law. Lectures on principles of law as used in every-day life and business.

Text used: Parson's "Commercial Law" and Hamilton's "Practical Law."

Senior Year, Third Term; 4 periods per week.

DEPARTMENT OF ENTOMOLOGY AND ZOOLOGY.

T. B. SYMONS, PROFESSOR.

L. M. PEAIRS, ASSISTANT.

Instruction is given in this Department with a view of giving the student, first, the general knowledge of invertebrate and vertebrate zoology, which is necessary as a foundation science for an agricultural education. Second, to fit the student in elementary and advanced entomology, both economic and systematic, in order that he may pursue this specialty after graduation. A course in economic entomology is given to provide those students who are specializing in any of the allied agricultural sciences with that information which is necessary to their ideal development.

Students wishing to take advanced work in invertebrate zoology are advised to select some subject in entomology. As the State and Experiment Station entomological work is conducted through this department there are special advantages for students in applied entomology.

The department library contains a majority of the principal entomological publications, which are a great help in advanced work. The laboratory is supplied with a large collection of insects for the use of students, and is well equipped with microscopes and other apparatus necessary for practical work in entomology.

The Insectary of the State Horticultural Department and the Maryland Experiment Station, which is joined to the laboratory, affords facilities for special investigation to a limited number of advanced students.

COURSES OFFERED.

I. Entomology. Lectures, laboratory and field work. This course is designed as an introduction to all the other work in the department. The lectures treat of the zoological position of insects, the characteristics of the orders, sub-orders and the more important families, the habits and life histories of insects, with special reference to those species that are of economic importance. The laboratory and field work include the study of the more general features of insect anatomy, the determination of some common species and the collection and preservation of insects.

Sophomore Year, Third Term; 2 theoretical and 4 practical periods per week.

II. Zoology. Both invertebrate and vertebrate zoology are discussed in this course. For the time allowed, a very thorough study is made of the classification, anatomy, physiology, characteristics and habits of animals from the lowest to the highest forms. A representative of each of the larger groups is dissected in the laboratory. This course is designed to give the student a general knowledge of zoology.

Junior Year, First Term; 3 theoretical and 6 practical periods per week.

III. Systematic Entomology. Open to students who have taken course I or its equivalent. A thorough study of the structure, habits, life histories and classification of insects. Intended for students wishing to make entomology a specialty.

Junior Year, First and Third Terms; 2 theoretical and 4 practical periods per week.

IV. Economic Entomology. Lectures on applied entomology. Discussion of the more important insect pests and the methods of combating them.

Junior Year, Third Term; 2 theoretical and 4 practical periods per week.

V. Advanced Entomology. Open only to students who have completed II, III or their equivalents. Morphology and ecology of insects. Special and research work will depend upon the ability and special object of the student. This course is given for those who wish to pursue entomology as a profession. Students making botany their major subject will be required to take the equivalent of 3 theoretical periods per week in entomology.

Senior Year; 10 periods per week.

DEPARTMENT OF HORTICULTURE.

C. P. CLOSE, PROFESSOR.

P. M. NOVIK, ASSSOCIATE PROFESSOR.

G. W. FIROR, ASSISTANT.

F. W. BESLEY, LECTURER ON FORESTRY.

The Horticultural Department offers two courses: (a) a four-year course leading to the degree B. S.; (b) a two-year course for proficiency in which a certificate is awarded.

The instruction in horticulture is specially based upon practical and economical fruit growing, truck farming and commercial floriculture. The orchards, gardens and new greenhouses of the Experiment Station offer to students a splendid opportunity to observe and study modern methods of fruit growing, vegetable growing and the forcing of greenhouse flowers and vegetables. The work in floriculture is supplemented by trips to modern establishments of successful greenhouse men in Baltimore, Washington and

vicinity. Similar trips to supplement the work in landscape gardening and truck and fruit growing, are made from time to time. These trips are a portion of the regular work, and are often made on Saturday. Usually the expenses are paid by the College.

Additional facilities and equipment are added annually to make the instruction in horticulture thoroughly practical, efficient and up-to-date.

HORTICULTURAL COURSES.

I. Principles of Plant Propagation and Nursery and Greenhouse Management. This is a discussion of the propagation of plants, and their care in the nurseries and greenhouses. Practice is given in ordinary greenhouse and garden work, including the propagation of plants by seedage, cuttage, layerage and graftage, the planting and potting of plants, etc.

Text-book: "The Nursery Book," Bailey.

Sophomore Year, First Term; 2 theoretical and 2 practical periods per week; Second Term; 3 theoretical periods per week.

II. Olericulture, Vegetable and Truck Gardening. This includes the origin, history and botanical relations of garden vegetables; the careful study of the location, of the soil, of fertilizers, of the general cultivation for vegetable gardens, of the forcing of early and tender vegetables, and of the making and management of hot-beds and cold-frames.

Text-book: "Vegetable Gardening," Green.

Junior Year, Third Term; 2 theoretical and 3 practical periods per week.

III. Practical Pomology I: Fruit Growing (Orcharding). This is a discussion of the principles underlying the growing of orchard fruits. The work begins with the origin of our cultivated fruits and the practical methods of propagating them. Next follows the study of location for orchards and the planting of trees. General care and practice are given in the proper pruning of all classes of fruits. In the College nursery the students propagate different kinds of nursery stock.

Text-books: "The Nursery Book," Bailey and "The Principles of Fruit Growing," Bailey.

Junior Year, First and Second Terms; 2 theoretical and 2 practical periods per week.

IV. Practical Pomology II: Small Fruits. Lectures and practice in the propagation, planting and care of strawberries and bush fruits on a commercial basis.

Text-book: "Bush Fruits," Card.

Senior Year, Third Term; 2 theoretical and 2 practical periods per week.

V. Systematic Pomology. This embraces a study of the evolution and relationship of the economic fruits; the study and describing of fruits and fruit trees, the study and drawing of buds, leaves and fruits. Different kinds of fruit are collected from all parts of the State for study and identification by the students.

Text-book: "Systematic Pomology," Waugh. Reference books: "The Evolution of Our Native Fruits," Bailey; "The American Fruit Culturist," Thomas; and several others.

Senior Year, First and Third Terms; 2 theoretical and 2 practical periods per week.

VI. Harvesting, Storing and Marketing of Fruits and Vegetables. The following points are discussed: profitable marketing of garden and orchard products, harvesting, packing, storing, and marketing of fruits and vegetables, market methods, the middle man, pools and shipping associations, refrigerator cars and cold storage and the utilization of waste and by-products.

Text-book: "Fruit Harvesting, Storing, Marketing," Waugh.

Senior Year, Third Term; 2 periods per week.

VII. Greenhouse Construction. Lectures and drawing. A study of the materials used for greenhouses, heating systems, etc. A discussion of the different kinds of greenhouses, and their adaptation for different purposes.

Text-book: "Greenhouse Construction," Taft.

Senior Year, Second Term; 1 theoretical and 3 practical periods per week.

VIII. Floriculture I: Culture of Cut Flowers. Lectures and greenhouse practice. This course is devoted to a thorough discussion of the special cut-flower business. It includes the propa-

gation, growing and forcing of the most important cut-flower plants, the kind of houses best adapted for special cultures, the studying of varieties, scoring, etc.

Text-book: "Greenhouse Management," Taft.

Junior Year, Second Term; 3 theoretical and 2 practical periods per week.

IX. Floriculture II: Decorative Plants for House and Garden. Lectures and instruction are given on the preparation of soils, and the growing of foliage and flowering plants for commercial and decorative purposes; the propagation of annuals and perennials for planting in the garden; the planting of window boxes and hanging baskets, etc. The students are required to name the plants in the College greenhouse and on the campus.

Text-books: "Greenhouse Management," Taft; "Practical Floriculture," Henderson.

Junior Year, Third Term; 3 theoretical and 2 practical periods per week.

X. Plant Breeding. This course commences with a study of theories on evolution and heredity. Then follows a thorough discussion of the modern plant-breeding methods as they are applied in this and foreign countries by important plant breeders. Cross-pollination work is done by the students in the College greenhouse and orchard.

Senior Year, Second and Third Terms; 2 periods per week.

XI. Landscape Gardening. Lectures, designing and practical work. The course commences with a study of the relation of the garden to architecture, and it continues with a study of the modern garden, the homestead, the playground, the public parks and the cemetery. It embraces a discussion of the technics of making lawns, walks and drives, beds of annuals and perennials, and the planting of trees and shrubs. On the completion of this course students must be familiar with all the trees, shrubs and other ornamentals used on the College lawns and campus.

Text-book: "Principles of Landscape Gardening," Waugh; and several references.

Senior Year, First and Second Terms; 4 periods per week.

XII. Research Work and Thesis. This work is given to the student to test and develop his powers of observation and initiation. The subject will be arranged with each student individually, and the results will be written up for a thesis, which is required of all candidates for the B. S. degree.

Junior Year, Third Term; 2 periods per week; Senior Year, three terms; 8 periods per week.

XIII. Post-Graduate Work. An opportunity for advanced work is given to candidates who have the B. S. degree.

FORESTRY COURSES.

The following courses in Forestry are offered:

I. General Forestry. Five lectures embodying a general survey of the subject, and its relation to agriculture and other industries. (Course I is included in the weekly lecture course in Agriculture.)

II. Farm Forestry. Includes Forest Botany, Woodlot Management, Measurement and Valuation of Forest Crops, Nursery Practice and Tree Planting. Lectures, recitations and field work.

Text-book: "Principles of American Forestry," Green.

Senior Year, Second Term; 3 periods per week (required in Horticultural and Agricultural Courses—elective in General Science).

III. Wood Technology. A study of common commercial woods, their structure, identification, uses and commercial value. Decay of woods and methods of preservation.

Senior Year, Second Term; 1 period per week (required in Mechanical and Civil Engineering Courses—optional in Agricultural and Horticultural).

DEPARTMENT OF LANGUAGES.

THOMAS H. SPENCE, PROFESSOR.

The Department of Languages embraces the study of three branches: Latin, French and German. All students are required to take the courses in German. Students may elect to take Latin in the Freshman year in place of History.

The course of study in Latin is given with two ends in view—first, to train the mind into accurate and close methods of reasoning; second, to give the student a more thorough and comprehensive knowledge of his own language than he could otherwise acquire. Especial attention is paid to Latin forms and terminations and to the derivation of English words from Latin roots.

So large a proportion of modern scientific literature is in German and French that a reading knowledge of these languages has become almost essential to the student pursuing advanced courses in the various spheres of scientific research. Instruction in these branches is given, therefore, to enable the student to translate intelligently the works of French and German masters in the domain of science, for, frequently there are no English versions of their works. As the student becomes more familiar with foreign scientific terms and construction, he is required to translate treatises bearing upon the special line of work which he may be pursuing. The study of French is offered as an option in the Senior Year.

LATIN COURSES.

I. Grammar and Composition. For students of the Freshman class who elect Latin in place of History.

The aim of this course is to give the student a familiarity with Latin forms and terminations, and to enable him to read simple Latin prose.

Text-books: Gildersleeve's "New Latin Primer," Collier and Daniel's "First Year Latin," or Bingham's "Latin Grammar."

Freshman Year, three terms; 4 and 3 periods per week.

GERMAN COURSES.

I. Grammar and Conversation. Text-book: Otis' "Elementary German."

Sophomore Year, Third Term; 5 periods per week.

II. Translation. Text-books selected from the following: Hauff's "Das Kalte Herz," Schiller's "Der Neffe als Onkel," Hillern's "Hocher als die Kirche," Grandgent's "Ali Baba and the Forty Thieves," Sybel's "Die Erhebung Europas," Walther's "Algemeine Meereskunde," Northrup's "Geschichte der Neuen Welt," Brant and Day's "Scientific German," and others.

Junior Year, three terms; 3 periods per week.

III. Translation of Scientific German. Selected readings from various texts and periodicals.

Senior Year, three terms; 4 periods per week.

FRENCH COURSES.

I. Grammar and Composition. Text-book: Chardenal's "Complete French Course."

Sophomore Year, First Term; 4 periods per week.

II. Translation. Text-books: Super's "French Reader," Rougemont's "La France," Fenelon's "Telemaque," Herdler's "Scientific French Reader," and French scientific periodicals.

Sophomore Year, Second and Third Terms; 4 periods per week. Alternative with German in Senior Year; Second Term, 5 periods per week; Third Term, 4 periods per week.

DEPARTMENT OF MATHEMATICS.

R. W. SILVESTER, PROFESSOR.

HENRY T. HARRISON, ASSISTANT PROFESSOR.

Mathematics is the basis upon which scientific information rests. A knowledge of the study is necessary, as much from the utilitarian point of view as from the mental training its acquisition gives. Its importance as a factor in our College course takes its rise from the former consideration. All instruction in this work is with a view to the equipping of students for the more practical work soon to follow.

The class work in Mathematics in the several courses consists of arithmetic, bookkeeping, algebra, geometry (plane and solid), trigonometry, descriptive geometry, in its application to mechanical drawing, analytical geometry, differential and integral calculus, in their application to mechanics, engineering, physics and surveying.

In the applied mathematics, bookkeeping is taught every student. No matter what vocation a man intends to follow, a knowledge of business forms and methods of systematic accounts is a re-

quisite to success. To be able to use an ordinary compass or transit, for the purpose of laying out, dividing and calculating the area of land, or of running outlines and leveling for the purpose of drainage, is a necessary accomplishment for every intelligent farmer.

COURSES OFFERED.

I. ELEMENTARY MATHEMATICS. General Review.
Freshman Year, First Term; 3 periods per week.

II. ALGEBRA. Text-book: Wentworth's "Complete Algebra."
Freshman Year, three terms; 5 periods per week, First Term; 8 periods per week, Second Term; 3 periods per week, Third Term.

III. PLANE GEOMETRY. Text-book: Wentworth's "Plane Geometry."
Freshman Year, Third Term, Sophomore Year, First Term; 5 periods per week.

IV. TRIGONOMETRY. Text-book: Wentworth's "Plane Trigonometry."
Sophomore Year, Second Term; 5 periods per week.

V. SOLID GEOMETRY. Text-book: Wentworth's Solid Geometry.
Sophomore Year, Third Term; 5 periods per week.

VI. ANALYTICAL GEOMETRY. Text-book: Wentworth's "Analytics."
Junior Year, First Term; 5 periods per week.
VII. CALCULUS. Text-book: Osborne's.
Junior Year, Second and Third Terms; 5 periods per week.

DEPARTMENT OF MECHANICAL ENGINEERING.

HARRY GWINNER, PROFESSOR.

HOWARD L. CRISP, ASSISTANT.

WILLIAM N. MICHAEL, ASSISTANT.

This department offers a four-year course to those who desire to prepare themselves to design and construct machinery or to superintend engineering establishments. The design of the course is to

furnish such theoretical instruction and engineering practice as will prepare its graduates for immediate usefulness in the factory and office, and enable them, after a moderate amount of professional experience, to fill positions of trust and importance in this profession.

Instruction is given by means of lectures and recitations, accompanied by a large amount of practice in the drafting rooms and shops.

The course leads to the degree of B. S. in Mechanical Engineering upon the satisfactory completion of the work outlined.

EQUIPMENT. The Mechanical Engineering Laboratories consist of a two-story brick building, 45 by 60 feet, containing the wood-working and machine shops, drafting room and lecture rooms; a one-story brick building, in which is the forge shop and foundry; and an annex, 25 by 50 feet, containing the boilers, which furnish steam for power, heat and experimental purposes, and the electric lighting equipment.

The wood-working shop contains accommodations for students in bench work and wood turning. The power machinery in this shop is a band and circular saw, five 12-inch turning lathes, a grindstone and an Oliver trimmer.

In the forge shops are sixteen power forges, two hand forges and a pressure fan and exhauster for keeping the shop free of smoke. There is a full assortment of smiths tools for each forge.

The foundry is equipped with a Whiting cupola, which melts 1,200 pounds of iron per hour, a brass furnace, one Mellett core-oven, and the necessary flasks and tools.

The machine shop equipment consists of one 10-inch Reed speed lathe, one 22-inch Fifield engine-lathe with compound rest, one 12-inch Reed combined foot and power lathe, two 14-inch Reed engine-lathes, one 24-inch Gray planer, one 16-inch Smith andMills shaper, one 24-inch Snyder drill press, one No. 4 Diamond emery tool grinder, and an assortment of vises, taps, dies, pipe-tools and measuring instruments.

The machinery of the pattern and machine shops is driven by a 9 by 14-inch automatic cut off, high speed engine, built by members of the Junior and Senior Mechanical Engineering classes, after the standard design of the Atlas engine. An 8 by 12-inch engine

drives the machinery of the blacksmith shop and foundry. It was presented to the College by the city of Baltimore, and secured through the efforts of Rear-Admiral John D. Ford, United States Navy, retired.

The drafting rooms are well equipped for practical work, being well lighted and of ample size.

COURSES OFFERED.

I. MECHANICAL DRAWING. Practice in plain lettering, use of instruments, projections and simple working drawings, the plates upon completion being enclosed in covers properly titled by the students.

Text-book: Rouillion's "Mechanical Drawing."

Freshman Year, three terms; 6 periods per week.

II. FREEHAND DRAWING. Straight and curved lines, lettering, leaves, plants and ornaments.

Freshman Year, First Term; 6 periods per week.

III. TECHNICAL INSTRUCTION. Explanation of the reading of mechanical drawings; the proper cutting angles, care and adjustment of carpenter tools; relative strength of wood joints; wood, its shrinking and warping, and how to correct and prevent. Drill in problems in arithmetic, algebra and drawing by notes and lectures.

Text-book: Goss' "Bench Work in Wood."

Freshman Year, First Term; 3 periods per week.

IV. WOOD WORK. During the first term is taught the use and care of bench tools, exercise in sawing, mortising, tenoning and laying out work from blue prints. The second term is devoted to projects involving construction, decoration and wood turning. During the third term the principles and processes of pattern making are taught, together with enough foundry work to demonstrate the uses of pattern making.

Freshman Year, three terms; 6 periods per week.

V. MECHANICAL DRAWING. Detailing of machinery and drawing to scale from blue prints. Tracing and blue printing, and representation of flat and round surfaces by ink shading.

Text-book: Rouillion's "Mechanical Drawing."

Sophomore Year, First Term; 6 periods per week.

VI. Elementary Applied Mechanics. Transmission of power by belts and pulleys, the results of forces acting upon bodies, bolts, nuts and screws, inclined plane, laws of friction, strength of shafting and bending moments of beams.

Text-book: Jamieson's "Applied Mechanics."

Sophomore Year, First Term; 4 periods per week.

VII. Blacksmithing. The making of the fire, and how to keep it in order. The operations of drawing-out, upsetting and bending of iron and steel, including the calculations of stock for bent shapes. Welding. Construction of steel tools for use in the machine shop, including tool dressing and tempering. Annealing.

Sophomore Year, First and Second Terms; 4 periods per week.

VIII. Foundry Work. Moulding in iron and brass. Core making. The cupola and its management. Lectures on the selections of irons by fracture, fuels, melting and mixing of metals.

Sophomore Year, Third Term; 8 periods per week.

IX. Descriptive Geometry. Its relation to mechanical drawing and the solution of such problems relating to magnitudes in space as bear directly upon those which present themselves to civil and mechanical engineers.

Text-book: Faunce's "Descriptive Geometry."

Sophomore Year, Second and Third Terms; 7 periods per week.

X. Elementary Machine Design. Freehand sketching of the details of machinery and making working drawings of same. Calculations and drawings of a simple type of steam engine. Notes and lectures.

Junior Year, three terms; 6 periods per week.

XI. Machine Work. Elementary principles of vise and machine work, which include turning, planing, drilling, screw cutting and filing. This is preceded by study of the different machines used in the machine shops.

Junior Year, three terms; 6 periods per week.

XII. Steam Engines and Boilers. The principles of steam and the steam engine, the slide valve and valve diagrams, the indi-

cator and its diagram; steam boilers, the various types and their advantages.

Text-book: Jamieson's "Steam and Steam Engines."

Junior Year, First Term; 4 periods per week.

XIII. Power Plants. Lectures on the location, construction, equipment and engineering of power plants.

Text-book: Hutton's "Mechanical Engineering of Power Plants."

Senior Year, Second Term; 3 periods per week.

XIV. Advanced Machine Design. The First Term is devoted to lectures and text-book work on the strength and proportions of machine parts, and the design of a hand winch or crab by rational and empirical methods. During the Second Term the student is thrown upon his own resources to grapple with assigned problems. During the Third Term, the time is devoted to the design of a power punch and hand power crane.

Text-books: Low and Bevis' "Machine Drawing and Design," Cambria and Carnegie hand-books, Kent's "Mechanical Engineer's Pocket Book."

Senior Year, three terms; 6 periods per week.

XV. Graphic Statics. The theory and practice of the graphical method of determining stresses in cranes, roof trusses and bridges, and stress on beams and girders due to traveling loads.

Text-book: Merriman and Jacoby's "Graphic Statics."

Senior Year, First Term; 4 periods per week.

XVI. Machine Shop Work. Advanced machine work; the laying out, assembling and construction of some piece of machinery such as an engine-lathe or dynamo.

Senior Year, three terms; 8 periods per week.

XVII. Elementary Experimental Engineering. Determining the amount of moisture in steam, the efficiency of the injector, the transit and its uses, indicator practice and the use of the planimeter, slide value setting, the slide rule and micrometer, the analysis of boiler feed water, and flue gases, the determination of proper lubricants.

Senior Year, Third Term; 6 periods per week.

MILITARY DEPARTMENT.

EDWARD LLOYD, MAJOR, U. S. A., COMMANDANT.

The Military Department is a distinctive feature of the College. By special Acts of Congress, provision is made for the maintenance of a Department of Military Science and Tactics in each of the land-grant colleges. An officer of the United States Army is detailed to act as instructor in military tactics, and as commandant of cadets.

The Military Department of this College is in a most flourishing condition. All students upon entering, unless physically incapacitated, are enrolled in one of the companies of the cadet battallion. Students are required to wear the prescribed uniform at all times when on duty. The discipline in barracks is entrusted to cadet officers, under the supervision of the Commandant, and the discipline of the College is generally military in its nature. The practical instruction of the cadets consists of daily drills in the "School of the Soldier," "School of the Company," "School of the Battalion," and outpost duty. The study of tactics and lectures on military science, with practical lessons in procedure of military courts, constitute the class-room work of the Department.

The Military Department is a decided factor in the moral and physical development of the student body. By encouraging habits of promptness, obedience and neatness, and by its beneficial effects upon the carriage and general health of the students, it adds materially to the usefulness of the College as an educational institution.

DISCIPLINE.

The discipline of the College, as has been stated, is generally military in its character. Students are under the control of cadet officers, subject to the direction of the officer in charge, who makes a daily report to the Commandant of Cadets. The final authority, however, in all cases, is the President of the College.

All students are expected to conduct themselves as young gentlemen worthy of respect and confidence, and to be zealous and loyal to duty under all circumstances. Upon entrance, each one is required to give his word that he will comply with all the rules and

regulations of the institution. A copy of the rules is then given him, and he is held responsible for all acts in disregard thereof. *Cadet officers in receiving the honors which promotion implies, accept with them obligations and duties which they are bound to regard. This is the keynote of student government. Failure in duty means, necessarily, forfeiture of confidence and rank.*

Punishment for trivial breaches of regulations consists of deprivation of privileges, confinement to grounds or rooms, or special military duties; for aggravated offenses punishment may be suspension or expulsion, at the discretion of the Faculty and the President.

If an excessive number of demerits be given to any student during one term, marked deficiency in conduct is apparent, and his parents or guardian must at once remove him from the College.

MILITARY PROMOTION.

The awarding of commissions and of warrants to officers and non-commissioned officers of the battalion is based on soldierly bearing, observance of the rules of the College and scholastic attainments. The facts on which the final standing is made for recommendation for promotion are obtained from the Commandant's record of soldierly bearing and conduct, and from the recorded reports of the Faculty as to conduct, recitations and examinations. Commissioned officers are selected from the Senior Class. These officers are required to serve for the year, performing all duties imposed by the regulations of the College as a part of their regular course of training. Their conduct as officers will be rated as a study, having a value of five (5) theoretical periods per week, and a quarterly grade will be given. Failure to perform such duties shall constitute a deficiency, causing forfeiture of both diploma and commission. All members of the Senior Class will be required to perform these duties. All seniors with quarters in barracks will be required to drill either as officers or privates. Sergeants are selected from the Junior Class, and corporals from the Sophomore Class. Exceptions will be made to this order, only when the number of men in any one class qualified for promotion is not sufficient for the quota of officers required. The standing of a cadet at the end of the year will be the basis of recommendation for his promotion. The

possibility of his working off conditions during the summer cannot be considered, this being a very uncertain factor.

UNIFORM.

The cadet uniform, which is required to be worn by students at all times, is made by contract with the tailors at a much lower price than it could be furnished to individuals. The student's measure is taken after he arrives at the College, and the fit is guaranteed. For fall and winter the uniform is of substantial cadet-gray cloth, while in spring and summer a uniform of light khaki is used.

DEPARTMENT OF ORATORY.

CHARLES S. RICHARDSON, PROFESSOR.

The object of this department is to give a thorough training in public speaking. The work is begun with easy lessons in Elocution, and this is continued until the student has acquired a mastery of vocal expression, and a pleasing and forcible delivery. The student is then required to deliver both extempore and prepared speeches, covering a wide range of subjects, in this way not only securing practice in delivery, but also developing the power of logical thought.

COURSES OFFERED.

I. ELOCUTION. Articulation, accent, modulation, inflection, force and elocutionary pause; expressive management of the body, attitude and motion. Selections of poetry and prose are read and declaimed by students.

Freshman Year, First Term; 1 period per week.

II. ELOCUTION. Simple lectures on orators and oratory. Methods of analysis and subjects for orations. Original orations by students, both extempore and prepared, on simple abstract subjects and speeches before the class on the less complex public questions. Subjects for orations requiring research in different departments of knowledge. Lectures on parliamentary law.

Freshman Year, Second Term; 2 periods per week.

III. ELOCUTION. A review of all the work of the Freshman Year. More advanced selections for declamation (Shakespeare, Macaulay, Webster, etc.). Lectures on ancient and modern orators, with readings and declamations, by students, from orations.

Sophomore Year, First Term; 1 period per week.

IV. ELOCUTION. Extempore speeches by students on various subjects. Prepared original orations by students on abstract subjects. Prepared original orations by students on subjects requiring careful and intelligent research, including the important public issues of the day as Tariff, Currency, Territorial Expansion, Trades Unions, Trusts, Federal Control of Public Utilites, etc. Lectures on parliamentary law.

Sophomore Year, Second Term; 2 periods per week.

DEPARTMENT OF PHYSICAL CULTURE.

CHARLES S. RICHARDSON, DIRECTOR.

The physical culture of the students is provided for by a regular course of instruction in the Gymnasium. The course is carefully planned, so as to develop gradually and scientifically the physical powers of each student. Beginning with the simplest calisthenic exercises, the instruction covers the whole field of light and heavy gymnastic and field and track athletics.

The equipment and arrangement of the Gymnasium is very complete, and the interest manifested by the students is a sufficient proof of the success of this department. While desiring to make the work in the Gymnasium of practical value to all the students, the required work only extends through the Preparatory and Freshman years.

Three periods per week, Preparatory and First and Second Terms, Freshman Year.

One of the most valuable features of this department is a complete anthropometry outfit, by means of which measurements and strength tests of students are taken at the beginning, and also at the end of each scholastic year. By means of these measurements and

tests the exact physical condition of each individual student can be ascertained, and such special exercises given as will produce a symmetrical development of the body.

A valuable adjunct to this department has been the College Athletic Association, of which mention is made under the head of "Student Organizations."

PREPARATORY DEPARTMENT.

HENRY T. HARRISON, PROFESSOR IN CHARGE.

CHARLES S. RICHARDSON, ASSOCIATE.

This department was organized in 1892, and is designed to meet the requirements of those students who have not had the advantages of a thorough grammar school training, with a view to equipping them to enter the regular collegiate department.

Only such students are desired as will be able to enter the Freshman Class within a year, and who are fifteen years of age. This course is recommended especially to students who have not been to school for several years; for their progress in the regular collegiate course, by virtue of such a drawback, would be seriously impeded. It is to be remarked that as a rule the students who have taken this course make excellent progress in their later college work. Students in this department are subject to the same military regulations as other students.

COURSES OFFERED.

I. ARITHMETIC. Wentworth's "Grammar School Arithmetic," completed.
First and Second Term; 10 periods per week.

II. ARITHMETIC. Advanced work.
Third Term; 5 periods per week.

III. ALGEBRA. Wentworth's "Algebra" as far as quadratics.
Three terms; 5 periods per week.

IV. History. United States History, completed.
Three terms; 4 periods per week.

V. Geography. Descriptive Geography, completed.
First Term; 5 periods per week.

VI. Geography. Davis's "Physical Geography." Completed.
Second and Third Terms; 4 periods per week.

VII. English. Spelling, technical grammar, parsing and analysis, composition, letter writing and elocution.
Three terms; 8 periods per week.

VIII. Book-keeping. Single Entry.
Third Term; 6 periods per week.

DEPARTMENT OF VETERINARY SCIENCE.

SAMUEL S. BUCKLEY, PROFESSOR.

The veterinary subjects offered in this department are intended only to supplement the instruction given in the Agricultural courses, so that the student will have had a well-rounded practical education upon completion of the work of the Agricultural Department. Only those subjects of practical value in the care and management of animals are considered—the diseases known to be common to the animals of Maryland being given especial attention. The structures and functions of the digestive and milk-secreting organs are studied thoroughly on account of their practical importance.

COURSES OFFERED.

I. Microscopy and Animal Histology. This includes the study of the microscope, its use and care. Preparation of objects for immediate examination and permanent mounts. Preparation of tissues, sectioning, staining and mounting. Methods of measurement, enumeration and drawing of microscopic objects. The study of cells, tissues and organs of the animal body. The work is both theoretical and practical.

Sophomore Year, Second Term; 2 theoretical and 4 practical periods per week.

II. Comparative Anatomy and Physiology. For students in the Agricultural and General Science Courses. This course embraces a general consideration of the structures and functions of the animal body, with especial reference to animal production and dairying. It is not intended as preliminary to professional veterinary work, as such training necessarily comes within the province of veterinary colleges. It is, however, preparatory to the instruction given in veterinary elements in the Senior Year under Course III.

Junior Year, Second Term; 3 theoretical and 6 practical periods per week.

III. Veterinary Elements. For students of the Agricultural (Animal Husbandry) Course.

Senior Year, Second Term; 4 theoretical and 6 practical periods per week.

Note A—Students of the First Year of the Two-Year Agricultural Course will receive Course II with the Junior Class, and those of the Second Year will receive Course III with the Senior Class.

Note B—Lectures on veterinary subjects will be offered for students of the Short Winter Course in Agriculture.

THE COLLEGE LIBRARY.

F. B. BOMBERGER, LIBRARIAN.

The College Library may properly be regarded as one of the departments of the institution, as its aid for purposes of reference and its influence upon the mental development of the students must always be felt throughout all courses. The present quarters of the Library, while adequate for its immediate needs, will necessarily be too limited in the course of time. The reading room is well arranged and lighted, and is in all respects comfortable and convenient.

While the Library is not large, the collection of works has been carefully chosen, and the shelves contain a fair supply of works of reference, history, biography, essays, poetry and the standard works of fiction. Several thousand volumes of bound United States Government Reports comprise an important addition to the reference works of the Library. Most of the leading magazines and a number of newspapers are subscribed for; technical periodicals and works of reference relating to specific branches are deposited in the libraries of the various departments.

The works in the Library are classified according to the modern Dewey Decimal System of classification. As rapidly as possible the sets of Government Reports that are most valuable are being completed and catalogued. At present there are on hand completed to date, or nearing completion, sets of the reports and bulletins of the United States Agricultural Department, the Geological Survey, the Fish Commission, the Smithsonian Institution, the National Museum, the Bureau of Ethnology, the Bureau of Education, the Labor Bureau, the Census Bureau and the Bureau of American Republics. There are also nearly completed sets of the Consular Reports, Special Consular Reports, the Engineers Reports of the United States Army, the War of the Rebellion Record and messages and documents, besides many other miscellaneous publications of great value. Many valuable State publications are also on file.

It is the aim of the Librarian to render all these valuable works available for easy reference by the students.

Grateful acknowledgment is made to the officers of all the departments and bureaus above noted for their publications, and especially to the United States Superintendent of Documents, through whose aid many public documents have been received. Thanks are likewise due the following for valuable additions to the Library: Johns Hopkins University, the Geological Survey, the Weather Service, the Highway Commission, and the Bureau of Statistics and Information. Especial thanks are due the county press for their liberality in sending their publications free to the Library.

COURSES OF STUDY.

In order to systematize the work of the different departments of the College, and as far as possible arrange for specialization within limits consistent with the normal development of individual students, six distinct courses of study have been prepared, one of which the student is expected to choose upon entering the regular college work.

These courses are Agriculture, Horticulture, General Science, Chemistry, Mechanical Engineering, Electrical Engineering and Civil Engineering.

A continuous and progressive course of work, beginning in the Freshman year, with a nearly uniform course for all students, and gradually separating in the three succeeding years until the class-work is almost wholly specialized, has been found to be most satisfactory. A broad and liberal foundation in English, mathematics and history is laid in the Freshman and Sophomore years, and then the particular line of study desired is emphasized more and more until the end of the course.

In the tabular statement of the courses the hours per week are given, the numbers in parenthesis denoting practical or laboratory periods, others theoretical or recitation periods.

AGRICULTURAL COURSES.

The four-year agricultural course is designed to fit the student for conducting practical operations on the farm, or, should taste or circumstance so direct, to successfully prosecute advanced scientific research along the lines of agronomy or animal husbandry. With this end in view, the course has been made at once comprehensive and technical, comprehensive enough to include whatever is necessary for the complete development of the work, yet technical enough to make the student feel that he is a specialist and equipped for special work.

This course is the result of development. While a man must specialize to attain any eminent success, yet in agricultural science it is not possible to specialize to the same degree as in some others, because it is itself made up of many sciences. Experience has clearly shown also that in agriculture the practical must keep even pace with the theoretical, that true education trains the eye and

hand as well as the intellect, and should give to the student the ability not only to acquire and originate ideas, but also to express them in words and deeds.

Throughout the Freshman year and the first two terms of the Sophomore year the course is non-technical.

At the beginning of the third term of the Sophomore year, agronomy, the production of farm crops, is taken up by all students of agriculture.

In the Junior year the course is divided into two sections, known as the Division of Agronomy and the Division of Animal Husbandry. This arrangement enables the student to specialize along whichever line accords with his interests or desires, while at the same time he is taught the fundamental facts of both. This enables him to see most clearly, and to harmonize his work to, the relations which must exist between these great branches of agriculture.

TWO-YEAR COURSE IN AGRICULTURE.

A large number of young men seeking to better themselves in their chosen profession of farming are calling for instruction in those courses pertaining to practical agriculture. Many of them have neither the time nor means at hand to take the full four-year course, but while away in school they wish to gain the greatest possible amount of instruction and assistance which is particularly applicable to the farm. The farm can no longer be run in the old-time haphazard way. There is a demand for skill and the highest order of intelligence to make a success on the farm, as in any other line of human endeavor. Brains must be planted with each little seed, and again put into the feeding trough for the animal. To meet the demand for instruction along these lines, and for a better understanding of the underlying principles of successful agriculture, a short course of two years has been provided.

It embraces much of the technical work of the four-year course, and is especially designed to lay a foundation that will secure success in practical farming, which, as it must be conducted today, is a union of many interests. To enter this course a working knowledge of arithmetic, including fractions, mensuration and percentage, and a common-school training in English, is required.

Four Year Agricultural Course, Freshman and Sophomore Years.

Arabic figures indicate periods per week, those in parenthesis being practical work. The Roman numerals refer to courses described on previous pages.

Freshman.	Terms.		
	I.	II.	III.
Elementary Mathematics (Math. I.)	3	.....	.....
Algebra (Math. II.)	5	8	3
Plane Geometry (Math. III.)	.....	.....	5
Language and Composition (Engl. I.)	5	5	5
American Literature (Engl. II.)	.....	.....	3
*General History (Hist. I.)	4	4	.....
*English History (Hist. II.)	.....	.....	4
*Latin Grammar and Composition (Lat. I.)	4	4	4
Elocution I. and II	1	2	.....
Physical Culture	(3)	(3)	.....
Geology	4	5	.....
Agricultural Lectures	(2)	(2)	(2)
Elementary Botany (Bot. I.)	.....	2(4)	.....
Systematic Botany (Bot. II.)	.....	.....	2(4)
Freehand Drawing (M. E. II.)	(6)	.....	.....
Wood Work (M. E. IV.)	.....	.....	(6)

Sophomore.	Terms.		
	I.	II.	III.
Plane Geometry (Math. III.)	5	.....	.....
Trigonometry (Math. IV.)	.....	5	.....
Solid Geometry (Math. V.)	.....	.....	(1)
Rhetoric and Composition (Engl. IV.)	4	4	.....
English Literature (Engl. V.)	.....	.....	3
Elocution III. and IV	1	2	.....
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
Physics, Elementary (Phys. I.)	4	.....	.....
Elementary Surveying (C. E. III.)	.....	.....	2(4)
Mechanical Drawing (M. E. I.)	(6)	.....	.....
Plant Propagation (Hort. I.)	2(2)	3	.....
Agricultural Lectures	(2)	(2)	(2)
Farm Crops (Agron. I.)	.....	.....	3(4)
Plant Physiology (Bot. III.)	.....	2(4)	.....
Miscroscopy and Animal Hist. (Vet. Sci. I.)	.....	(6)	.....
Entomology I	.....	.....	2(4)
German Grammar and Comp. (Germ. I.)	.....	.....	5(1)

*History and Latin alternative.

Four-Year Agricultural Course, Junior and Senior Years.

Agronomy Division.

Junior.	Terms.			Senior	Terms.		
	I	II	III		I	II	III.
English Composition (Engl. VI.)	1	1	1	English Classics (Engl. IX.)	4	4	4
Civics I	.....	3	3	Psychology (Engl. X.)	4	.....	.....
German Translation (Germ. II.)	3	3	3	English Composition (Engl. XI.)	1	1	1
Elementary Organic Chemistry (Chem. II.)	3	.....	.....	Current Topics (Hist. III.)	.....	.....	1(1)
Qualitative Analysis (Chem IV.)	1(6)	.....	.....	Political Economy (Civics III.)	3	4	.....
Quantitative Analysis (Chem. VIII.)	.....	1(4)	1(4)	Business Law (Civics III.)	.....	.....	4....
Mineralogy (Chem. IX.)	.....	1(4)	.....	Scientific German (Germ. III.)	4	.....	.....
Economic Plants (Bot. VI.)	.....	.....	2(4)	Agricultural Chemistry (Chem. XIII.)	3	.....	.....
Agricultural Lectures	(2)	(2)	(2)	Quantitative Analysis (Chem. VIII.)	(4)	.....	.....
Farm Crops (Agron. I.)	.....	2(2)	2(4)	Vegetable Pathology (Bot. VIII.)	.....	2(4)	.....
Soils (Agron. II.)	2(2)	3(4)	.....	Agricultural Lectures	(2)	(2)	(2)
Farm Drainage (Agron. III.)	.....	.....	2(2)	Plant Production (Agron. IV.)	3(4)	.....	.....
Breeds and Scoring (A. H. I.)	3(4)	.....	.....	Fertilizers (Agron. V.)	.....	3(4)	.....
Principles of Breeding (A. H. II.)	3	.....	.....	Farm Machinery (Agron. VI.)	.....	.....	2(4)
Live Stock Management (A. H. III.)	.....	2	.....	Farm Management (Agron. VII.)	.....	.....	2
Olericulture (Hort. II.)	.....	.....	2(3)	Crop Produc. or Soils (Agron. VIII, IX.)	.....	.....	2(4)
Pomology (Hort. III.)	2(2)	2(2)	.....	Farm Forestry (For. II.)	.....	3	.....
.....	.....	.....	.....	Plant Breeding (Hort. X.)	.....	2	2
.....	.....	.....	.....	Research and Thesis	(2)	2(4)	2(4)

Four-Year Agricultural Course, Junior and Senior Years.

Animal Husbandry Division.

Junior.	Terms.			Senior.	Terms.		
	I.	II.	III.		I.	II.	III.
English Composition (Engl. VI.)	1	1	1	English Classics (Engl. IX.)	4	.....	.....
Civics I	.....	3	3	Psychology (Engl. X.)	*4	.....	.....
German Translation (Germ. II.)	3	3	3	English Composition (Engl. XI.)	1	1	1
Elementary Organic Chemistry (Chem. II.)	3	.....	.....	Current Topics (Hist. III.)	.....	.....	1(1)
Qualitative Analysis (Chem. IV.)	1(6)	.....	.....	Political Economy (Civics II.)	3	4	.....
Quantitative Analysis (Chem. VIII.)	.....	1(4)	1(4)	Business Law (Civics III.)	.....	.....	4
Organic Chemistry (Chem. X.)	.....	3	3	Scientific German (Germ. III.)	*4	.....	.....
Zoology (Entom. II.)	3(3)	.....	.....	Agricultural Chemistry (Chem. XIII.)	3	.....	.....
Anatomy and Physiology (Vet. Sci. II.)	.....	3(6)	.....	Quantitative Analysis (Chem. VIII.)	(4)	.....	.....
Agricultural Lectures	(2)	(2)	(2)	Veterinary Science (Vet. Sci. III.)	.....	4(6)	.....
Soils (Agron. II.)	2(2)	3(4)	.....	Agricultural Lectures	(2)	(2)	(2)
Farm Drainage (Agron. III.)	.....	.....	2(2)	Farm Management (Agron. VII.)	.....	.....	2
Breeds and Scoring (A. H. I.)	3(4)	.....	.....	Stock Judging (A. H. V.)	(4)	.....	.....
Principles of Breeding (A. H. II.)	3	.....	.....	Herd Book (A. H. VI.)	2(2)	.....	.....
Live Stock Management (A. H. III.)	.....	2	2(2)	Animal Nutrition (A. H. VII.)	.....	4	4(4)
Dairying (A. H. IV.)	.....	.....	3(4)	Farm Forestry (For. II.)	.....	3	.....
Research (A. H. IX.)	.....	.....	2(2)	Small Fruits (Hort. IV.)	.....	.....	2(2)
.....	.....	.....	.....	Research and Thesis	(2)	2(4)	4(4)

*Psychology and German alternative.

Two-Year Course in Agriculture.

First Year.	Terms.			Second Year.	Terms.		
	I	II	III		I	II	III
English Composition (Engl. I.)	5	5	5	Farm Management (Agron. VII.)	.....	.....	2
Plant Culture (Hort. I.)	2(2)	3	.....	Principles of Breeding (A. H. II.)	3	.....	.....
Farm Crops (Agron. I.)	2(4)	.....	2(4)	Fertilizers (Agron. V.)	.....	3(4)	.....
Soils (Agron. II.)	2(2)	3(4)	.....	Farm Machinery (Agron. VI.)	.....	.....	2(4)
Drainage (Agron. III.)	.....	.....	2(2)	Animal Nutrition (A. H. VIII.)	.....	4	.....
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)	Grain Judging (Agron. I.)	.....	1(4)	.....
Breeds and Scoring (A. H. I.)	3(4)	.....	.....	Agricultural Lectures	(2)	(2)	(2)
Live Stock Management (A. H. III.)	.....	2	2(2)	Wood Work (M. E. IV.)	(6)	.....	.....
Botany I and II	.....	.....	2(4)	English Composition (Engl. VI.)	1	1	1
Agricultural Lectures	(2)	(2)	(2)	Business Law (Civics III.)	3	.....	.....
Anatomy and Physiology (Vet. Sci. II.)	.....	(9)	.....	Farm Forestry (For. II.)	.....	3	.....
.....	.....	.....	.....	Pomology (Hort. III.)	2(2)	2(2)	.....
.....	.....	.....	.....	Fruit Harvesting (Hort. VI.)	.....	.....	2
.....	.....	.....	.....	Economic Entomology (Ent. IV.)	.....	.....	2(4)
.....	.....	.....	.....	Dairying (A. H. IV.)	.....	.....	3(4)
.....	.....	.....	.....	Plant Production (Agron. IV.)	4(4)	.....	2(2)
.....	.....	.....	.....	Veterinary Science (Vet. Sci. III.)	.....	4(6)	.....
.....	.....	.....	.....	Stock Judging (A. H. V.)	(4)	.....	.....
.....	.....	.....	.....	Vegetable Gardening (Hort. II.)	.....	.....	2(3)

Upon completion of this course a certificate is granted, taking the place of the diploma for the four-year course.

SPECIAL WINTER COURSE IN AGRICULTURE.

A ten-week course, designed for those who are unable to take one of the longer courses, and including the largest amount of purely practical information about farming in all its phases. This course is invaluable to the young man desiring that information on agricultural topics so necessary to meet the sharp competition of the present day. The College authorities have removed the nominal charge of $5.00. We are anxious to have the young men of Maryland who intend to remain on the farm, embrace this opportunity. Many cannot afford a four-year course; this solves the problem for them.

Each student will be required to take not less than two hundred and fifty hours of work. Two hundred of these must be devoted to the following specified studies:

Soils, 22 hours.	Agricultural Chemistry, 20 hours.
Farm Dairying, 20 hours.	Farm Live Stock, 30 hours.
Manures, 20 hours.	Stock Feeding, 15 hours.
Plant Production, 25 hours.	Horticulture, 40 hours.

The other fifty hours will be devoted to such topics as the student may elect from the following: Veterinary Science, 40 hours; Tobacco Culture, 5 hours; Plant Physiology and Pathology, 15 hours; Economic Entomology, 20 hours; Carpentering and Blacksmithing, 45 hours; Farm Accounts, 12 hours; Road Construction and Leveling, 5 hours; Civil Government, 10 hours.

Tuition and room free. No expense for use of laboratories or supplies. Good board at moderate rates can be secured in the neighboring villages of Berwyn, Lakeland, Riverdale and Hyattsville—all within a short distance of the College and Experiment Station. Electric cars make frequent connections. A limited number can be accommodated at the College at $40.00 for the course. Students will be expected to furnish their own bed clothes, pillows, towels, napkins and overalls for dairy work. Short course students are not required to drill or wear uniforms.

CHEMICAL COURSE.

The Course in Chemistry is essentially the same as the General Science Course until the beginning of the Junior year, though any of the four-year courses would prepare for this, as the amount of chemistry is the same in all courses to the end of the Sophomore year, and the demands on the agricultural or technical chemist are now so varied that a foundation with more of the essentials of the agricultural or the mechanical courses is often desirable.

Beginning with the Junior year the major part of the student's time is devoted to chemistry, the practical work in the laboratory occupying approximately half of his time. The course is essentially a course in agricultural chemistry, fitting the graduate for positions in agricultural colleges, experiment stations, or the United States Department of Agriculture.

CIVIL ENGINEERING COURSE.

This course offers a young man an opportunity to obtain training in civil engineering that will enable him to engage in practical engineering work in the field or in the drafting room with the assurance that he has the necessary preparation to profit by the experience thus afforded; or that will entitle him to advanced standing, if he desires to pursue a more extended course at a technical school of higher grade. The curriculum, which is outlined on the following pages, includes not only studies having culture value, but the sciences which form the basis of engineering. Students who have found themselves deficient in ability to learn mathematics are not advised to enter an engineering course. Upon the satisfactory completion of this course the degree of Bachelor of Science in Civil Engineering, is conferred.

Students during the Second Term of the Junior year will be required to examine some work on Engineering, and make a report to the class.

A thesis dealing with some problem in Engineering will be required of all applicants for the degree of Bachelor of Science in Civil Engineering.

All engineering students in the Junior and Senior Classes will be required to spend a portion of their time in the reading of the current engineering magazines.

Chemical Course.

Freshman.	Terms. I.	II.	III.
Elementary Mathematics (Math. I.)	3	.....	.....
Algebra (Math. II.)	5	8	3
Plane Geometry (Math. III.)	.....	.....	5
Language and Composition (Engl. I.)	5	5	5
American Literature (Engl. II.)	.....	.....	3
General History (Hist. I.)	4	4	.....
*English History (Hist. II.)	.....	.....	4
*Latin Grammar and Comp. (Latin I.)	4	4	4
Elocution I and II	1	2	.....
Physical Culture	(3)	(3)	.....
Agricultural Lectures	(2)	(2)	(2)
Elementary Botany (Bot. I.)	.....	2(4)	.....
Systematic Botany (Bot. II.)	.....	.....	2(4)
Freehand Drawing (M. E. II.)	(6)	.....	.....
Geology	4	5	.....
Mechanical Drawing (M. E. I.)	.....	.....	(6)

Junior.			
English Composition (Engl. VI.)	1	1	1
Civics I	.....	3	3
German Translation (Germ. II.)	3	3	3
Physics II	4(4)	4(4)	4(4)
Elementary Org. Chem. (Chem. II.)	3	.....	.....
Qualitative Analysis (Chem. III.)	1(12)	.....	.....
Inorganic Preparations (Chem. V.)	(4)	.....	.....
Theoretical Chemistry (Chem. VI.)	2	.....	.....
Quantitative Analysis (Chem. VII.)	.....	1(12)	.....
Mineralogy (Chem. IX.)	.....	1(4)	.....
Organic Chemistry (Chem. X.)	.....	3	3
Volumetric Analysis (Chem. XII.)	.....	.....	2(16)
Agricultural Lectures	(2)	(2)	(2)

Sophomore.	Terms. I.	II.	III.
Plane Geometry (Math. III.)	5	.....	.....
Trigonometry (Math. IV.)	.....	5	.....
Solid Geometry (Math. V.)	.....	.....	5
Rhetoric and Composition (Engl. IV.)	4	4	.....
English Literature (Engl. V.)	.....	.....	3
American Literature (Engl. III.)	.....	.....	2(2)
Elocution III and IV	1	2	.....
General Chemistry (Chem. I.)	4(3)	4(4)	5(7)
Physics Elementary (Phys. I.)	4	.....	.....
Plant Propagation (Hort. I.)	2(2)	3	.....
Agricultural Lectures	(2)	(2)	(2)
French Grammar and Composition (Fr. I.)	4	.....	.....
Microscopy and Animal Hist. (Vet. Sci. I.)	.....	(6)	.....
German, Grammar and Comp. (Germ. I.)	.....	.....	5(1)
French Translation (Fr. II.)	.....	4	3
	.....	.....	.....

Senior.			
English Composition (Engl. XI.)	1	1	1
Current Topics (Hist. III.)	.....	.....	1(1)
Political Economy (Civics II.)	3	4	.....
Business Law (Civics III.)	.....	.....	4
Scientific German (Germ. III.)	4	4	4
Organic Chemistry (Chem. X.)	3	.....	.....
Organic Preparations (Chem. XI.)	.....	(16)	.....
Agricultural Chemistry (Chem. XIII.)	3	.....	.....
Agricultural Analysis (Chem. XIV.)	(20)	.....	.....
Indus. Phys. and Elec. Chem. (Chem. XV.)	.....	6(4)	5
Agricultural Lectures	(2)	(2)	(2)
Research and Thesis (Chem. XVI.)	.....	.....	(20)
	.....	.....	.....

Freshman	Terms. I.	II.	III.
Elementary Mathematics (Math. I.)	3	.....	.....
Algebra (Math. II.)	5	8	3
Plane Geometry (Math. III.)	.....	.....	5
Language and Composition (Engl. I.)	5	5	5
American Literature (Engl. II.)	.....	.....	3
*General History (Hist. I.)	4	4	.....
*English History (Engl. II.)	.....	.....	4
*Latin Grammar and Composition (Lat. I.)	4	4	4
Elocution I and II	1	2	.....
Physical Culture	(3)	(3)	.....
Geology	4	5	.....
Mechanical Drawing (M. E. I.)	(6)	(6)	(6)
Wood Work (M. E. IV.)	.....	.....	(6)
.....	.....	...	.....
.....	.....	.....	.....

Sophomore.	Terms. I.	II.	III.
Plane Geometry (Math. III.)	5	.....	.....
Trigonometry (Math. IV.)	.....	5	.....
Solid Geometry (Math. V.)	.....	.....	5
Rhetoric and Composition (Engl. IV.)	4	4	.....
English Literature (Engl. V.)	.....	.....	3
American Literature (Engl. III.)	.....	.....	2(2)
Elocution III and IV	1	2	.....
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
Physics, Elementary (Phys. I.)	4	.....	.....
Mechanics, Elementary (C. E. I.)	.....	3	.....
Architectural Drawing (C. E. II.)	.....	(4)	.....
Mechanical Drawing (M. E. V.)	(6)	.....	.....
Applied Mechanics (M. E. VI.)	4	.....	.....
Blacksmithing (M. E. VII)	(4)	.....	.....
Descriptive Geometry (M. E. IX.)	.....	3(4)	3(4)
German Grammar and Comp. (Germ. I.)	.....	.....	5(1)

Junior.			
Analytical Geometry (Math. VI.)	5	.....	.....
Calculus (Math. VII.)	.....	5	5
English Composition (Engl. VI.)	1	1	1
Civics I	.....	3	3
German Translation (Germ. II.)	3	3	3
Physics II	4(4)	4(4)	4(4)
Surveying (C. E. IV.)	3(5)	3(2)	2(4)
Topographical Drawings (C. E. V.)	(6)	(6)	(4)
Railway Engineering (C. E. VI.)	.....	.....	2
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Senior.			
English Composition (Engl. XI.)	1	1	1
Current Topics (Hist. III.)	.....	.....	1(1)
Political Economy (Civics II.)	3	4	.....
Business Law (Civics III.)	.....	.....	4
†Scientific German (Germ. III.)	4	4	4
†French	.....	5	4
Graphic Statics (M. E. XI.)	4	.....	.....
Structural Design (C. E. VII.)	2(4)	2(4)	2(4)
Strength of Materials (C. E. VIII.)	4	.....	.....
Hydraulics (C. E. IX.)	.....	5	.....
Railway Engineering (C. E. VI.)	2	.....	.....
Highway Engineering (C. E. X.)	.....	.....	3
Estimates of Cost (C. E. XI.)	.....	.....	1
Field Engineering (C. E. XII.)	(8)	(8)	(12)
Wood Technology (For. III)	.....	1	.....

*Latin and History alternative. †German and French alternative in Second and Third Terms.

ELECTRICAL ENGINEERING COURSE.

This course is being introduced because of the great demand for young men who are not only well trained in the practical construction and operation of electrical machines, but who have a thorough knowledge of the principles and laws controlling the phenomena and forces with which they have to deal.

The general plan of the course will be to make the student thoroughly acquainted with the scientific laws which are the basis of the profession, and at the same time to train him to adapt the laws to practise, to use his own judgment, and to apply honest and accurate methods in all his work.

The curriculum, as outlined in the following pages, for the Freshman and Sophomore Classes of the Session 1908-1909, includes those studies which provide a broad general culture, as well as a good foundation for the engineering work which follows. From the beginning of the Second Term of the Sophomore Year the electrical training will extend continuously throughout the course.

GENERAL SCIENCE COURSE.

The General Science Course is designed for those who desire to secure the advantages of a general liberal education, with the opportunity of specializing in some line of modern science. The basis of this course is a thorough training in mathematics, English and the principles of citizenship and government.

The scientific work of this includes Agriculture, Horticulture, Botany, Physics, Chemistry, Entomology, Zoology and Veterinary Science. In his first two years the student receives a general introduction to the several sciences, one of which in his Junior and Senior Year becomes his choice for more detailed work. A thesis upon some topic in the selected field completes his course, and entitles him to the degree of Bachelor of Science.

Electrical Engineering Course.

Freshman.	Terms.			Sophomore.	Terms.		
	I.	II.	III.		I.	II.	III.
Elementary Mathematics (Math. I.)	3			Plane Geometry (Math. III.)	5		
Algebra (Math. II.)	5	8	3	Trigonometry (Math. IV.)		5	
Plane Geometry (Math. III.)			5	Solid Geometry (Math. V.)			5
Language and Composition (Engl. I.)	5	5	5	Rhetoric and Composition (Engl. IV.)	4	4	
American Literature (Engl. II.)			3	English Literature (Engl. V.)			3
*General History (Hist. I.)	4	4		Elocution III. and IV	1	2	
*English History (Hist. II.)			4	General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
*Latin Grammar and Composition (Lat. I.)	4	4	4	Physics, Elementary (Phys. I.)	4		
Elocution I. and II.	1	2		Electricity, Elementary (E. E. I.)		2	2
Physical Culture	(3)	(3)		Mechanics, Elementary (C. E. I.)		3	
Mechanical Drawing (M. E. I.)	(6)	(6)	(6)	Mechanical Drawing (M. E. V.)	(6)		
Technical Instruction (M. E. III.)	3			Applied Mechanics (M. E. VI.)	4		
Wood Work (M. E. IV.)	(6)	(6)	(6)	Blacksmithing (M. E. VII.)	(4)		
				Foundry Work (M. E. VIII.)			(4)
				Descriptive Geometry (M. E. IX.)		3(4)	3(4)
				German Grammar and Comp. (Germ. I.)			5(1)

*Latin and History are alternative.

The curriculum for the Junior and Senior Years will be outlined as required.

FRESHMAN.	Terms. I.	II.	III.
Elementary Mathematics (Math. I.)	3	.....	.....
Algebra (Math. II.)	5	8	3
Plane Geometry (Math. III.)	.....	.....	5
Language and Composition (Engl. I.)	5	5	5
American Literature (Engl. II.)	.....	.....	3
*General History (Hist. I.)	4	4	.....
*English History (Hist. II.)	.....	.....	4
*Latin Grammar and Composition (Lat. I.)	4	4	4
Elocution I. and II	1	2	.....
Physical Culture	(3)	(3)	.....
Geology	4	5	.....
Agricultural Lectures	(2)	(2)	(2)
Elementary Botany (Bot. I.)	.....	2(4)	.....
Systematic Botany (Bot. II.)	.....	.....	2(4)
Freehand Drawing (M. E. II.)	(6)	.....	.....
Wood Work (M. E. IV.)	.....	.....	(6)

SOPHOMORE.	Terms. I.	II.	III.
Plane Geometry (Math. III.)	5	.....	.....
Trigonometry (Math. IV.)	.....	5	.....
Solid Geometry (Math. V.)	.....	.....	(1)
Rhetoric and Composition (Engl. IV.)	4	4	.....
English Literature (Engl. V.)	.....	.....	3
Elocution III. and IV	1	2	.....
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
Physics, Elementary (Phys. I.)	4	.....	.....
Elementary Surveying (C. E. III.)	.....	.....	2(4)
Mechanical Drawing (M. E. I.)	(6)	.....	.....
Plant Production (Hort. I.)	2(2)	3	.....
Agricultural Lectures	(2)	(2)	(2)
Farm Crops (Agron. I.)	.....	.....	3(4)
Plant Physiology (Bot. III.)	.....	2(4)	.....
Microscopy and Animal Histol. (Vet. Sci. I.)	.....	(6)	.....
Entomology I	.....	.....	2(4)
German Grammar and Comp. (Germ. I.)	.....	.....	5(1)

JUNIOR.			
English Composition (Engl. VI.)	1	1	1
†English Literature (Engl. VII.)	3	2	.....
Civics I	.....	3	3
†Logic (Engl. VIII.)	.....	.....	3
German Translation (Germ. II.)	3	3	3
Physics II	4(4)	4(4)	4(4)
Elementary Organic Chemistry (Chem. II.)	3	.....	.....
Qualitative Analysis (Chem. IV.)	1(6)	.....	.....
Quantitative Analysis (Chem. VIII.)	.....	1(4)	1(4)
Mineralogy (Chem. IX.)	.....	1(4)	.....
Zoology (Entom. II.)	3(6)	.....	.....
†Systematic Entomology (Entom. III.)	2(4)	.....	2(4)
Economic Entomology (Entom. IV.)	.....	.....	2(4)
Plant Morphology (Bot. V.)	.....	.....	2(4)
Agricultural Lectures	(2)	(2)	(2)
Anatomy and Physiology (Vet. Sci. II.)	.....	3(6)	.....

SENIOR.			
English Classics (Engl. IX.)	4	4	4
Psychology (Engl. X.)	4	.....	.....
English Composition (Engl. XI.)	1	1	1
Current Topics (Hist. III.)	.....	.....	1(1)
Political Economy (Civics II.)	3	4	.....
Business Law (Civics III.)	.....	.....	4
*Scientific German (Germ. III.)	4	4	4
*French	.....	5	4
‡Farm Forestry (For. II.)	.....	3	.....
Agricultural Lectures	(2)	(2)	(2)
Mycology (Bot. VII.)	2(2)	.....	.....
Advanced Entomology (Entom. V.)	3	3	3
§Botany VIII., IX., X., or Entomology V.	7	8	10
Plant Breeding (Hort. X.)	.....	2	.....
.....	.....	.....	.....
.....	.....	.....	.....

*History and Latin, and French and German alternative. †Literature and Logic replace Entomology for Botanical students. ‡Elective.
§Largely Practical.

FOUR-YEAR COURSE IN HORTICULTURE.

The Horticultural Course is designed to give practical and scientific instruction in the great productive occupation of Horticulture. Practical work in orchard, garden and greenhouse is made a prominent feature of the course, especially in its early part, which is designed to train young men in all the details of general fruit and truck growing. In this work the orchards, nursery and vineyard of the College and Experiment Station, which contain a great many varieties of all hardy commercial fruits, are used for practice and demonstration.

In the Freshman and Sophomore years the work is not materially different from that of the Agricultural and General Science courses, but in the Junior and Senior years the subjects of the course become grouped and specialized, and include a thesis upon some horticultural topic.

The advanced work in Horticulture is built on the practical work before outlined, but tends to the scientific side, and the training of men for scholastic and experimental work in colleges, experiment stations, or in the Department of Agriculture. Excursions are made by the students to floral establishments in Baltimore and Washington to note and study the commercial aspects of floriculture. Models in landscape architecture and treatment are furnished by the parks and government grounds in and about the national capital. The State Horticultural Society, by its meetings and exhibitions, affords the horticultural students of the College excellent training in the work of identifying, noting and judging fruit and vegetables.

TWO-YEAR COURSE IN HORTICULTURE.

The two-year course in Horticulture is intended for young men who wish to devote themselves to fruit and vegetable growing, or to commercial nursery or flower business, and who cannot afford the time required for a regular college course.

The course includes practically all of the subjects given in the Department of Horticulture, and those of the courses in Agriculture that are of importance for the study of general horticulture. Besides these, there is also a good training in English language, botany, entomology and chemistry.

Upon finishing the Course the student gets a certificate which gives him credit for the work he has completed at the College.

Four-Year Horticultural Course.

Freshman.	Terms. I.	II.	III.
Elementary Mathematics (Math. I.)	3	.....	.....
Algebra (Math. II.)	5	8	3
Plane Geometry (Math. III.)	.....	.....	5
Language and Composition (Engl. I.)	5	5	5
American Literature (Engl. II.)	.....	.....	3
*General History (Hist. I.)	4	4	.....
*English History (Hist. II.)	.....	.....	4
*Latin Grammar and Comp. (Latin I.)	4	4	4
Elocution I and II	1	2	.....
Physical Culture	(3)	(3)	.....
Geology	4	5	.....
Agricultural Lectures	(2)	(2)	(2)
Elementary Botany (Bot. I.)	.....	2(4)	.....
Systematic Botany (Bot. II.)	.....	.....	2(4)
Freehand Drawing (M. E. II.)	(6)	.....	.....
Woodwork (M. E. IV.)	.....	.....	(6)

Sophomore.	Terms. I.	II.	III.
Plane Geometry (Math. III.)	5	.....	.....
Trigonometry (Math. IV.)	.....	5	.....
Solid Geometry (Math. V.)	.....	.....	(1)
Rhetoric and Composition (Engl. VI.)	4	4	.....
English Literature (Engl. V.)	.....	.....	3
Elocution III and IV	1	2	.....
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
Elementary Surveying (C. E. III.)	.....	.....	2(4)
Physics, Elementary (Phys. I.)	4	.....	.....
Mechanical Drawing (M. E. I.)	(6)	.....	.....
Plant Propagation (Hort. I.)	2(2)	3	.....
Agricultural Lectures	(2)	(2)	(2)
Farm Crops (Agron. I.)	.....	.....	3(4)
Plant Physiology (Bot. III.)	.....	2(4)	.....
Microscopy and Animal Hist. (Vet. Sci. I.)	.....	(6)	.....
Entomology	.....	.....	2(4)
German Grammar and Comp. (Germ. I.)	.....	.....	5(1)

Junior.			
English Composition (Engl. VI.)	1	1	1
English Literature (Engl. VII.)	3	2	.....
Civics I	.....	3	3
German Translation (Germ. II.)	3	3	3
Elementary Organic Chemistry (Chem. II.)	3	.....	.....
Qualitative Analysis (Chem. IV.)	1(6)	.....	.....
Systematic Entomology (Ent. III.)	.....	.....	2(4)
Plant Histology (Bot. IV.)	.....	(8)	.....
Plant Morphology (Bot. V.)	1(3)	.....	.....
Economic Plants (Bot. VI.)	.....	.....	2(4)
Agricultural Lectures	(2)	(2)	(2)
Soils (Agron. II.)	2(2)	4(2)	.....
Farm Drainage (Agron. III.)	.....	.....	2(2)
Olericulture (Hort. II.)	.....	.....	2(3)
Pomology (Hort. III.)	2(2)	2(2)	.....
Floriculture (Hort. VIII, IX.)	.....	3(2)	3(2)
Research (Hort. XII.)	.....	.....	(2)
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Senior.			
*English Classics (Engl. IX.)	4	.....	.....
Psychology (Engl. X.)	4	.....	.....
English Composition (Engl. XI.)	1	1	1
Current Topics (Hist. III.)	.....	.....	1(1)
Political Economy (Civics II.)	3	4	.....
Business Law (Civics III.)	.....	.....	4
*Scientific German (Germ. III.)	4	.....	.....
Agricultural Chemistry (Chem. XIII.)	3	.....	.....
Mycology (Bot. VII.)	2(2)	.....	.....
Vegetable Pathology (Bot. VIII.)	.....	2(4)	.....
Agricultural Lectures	(2)	(2)	(2)
Farm Machinery (Agron. VI.)	.....	.....	(4)
Farm Forestry (For. II.)	.....	3	.....
Pomology, Systematic (Hort. V.)	2(2)	.....	2(2)
Small Fruits (Hort. IV.)	.....	.....	2(2)
Fruit Harvesting, etc. (Hort. VI.)	.....	.....	2
Greenhouse Construction (Hort. VII.)	.....	1(3)	.....
Plant Breeding (Hort. X.)	.....	2	2
Landscape Gardening (Hort. XI.)	2(2)	2(2)	.....
Research and Thesis	(4)	(4)	(8)

* History and Latin, and English Classics and German alternative.

Two-Year Course in Horticulture.

First Year.	Terms.			Second Year.	Terms.		
	I	II	III		I	II	III
English Composition (Engl. I.)	5	5	5	Fertilizers (Agron. V.)	.....	3(4)	.....
Plant Culture (Hort. I.)	2(2)	3	.....	Farm Machinery (Agron. VI.)	.....	.....	2(4)
Farm Crops (Agron. I.)	2(4)	.....	.....	Agricultural Lectures	(2)	(2)	(2)
Soils (Agron. II.)	2(2)	3(2)	.....	English Composition (Engl. VI.)	1	1	1
Drainage (Agron. III.)	.....	.....	2(2)	Farm Forestry (For. II.)	.....	3	.....
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)	Pomology (Hort. III.)	2(2)	2(2)	.....
Botany I, II, III, IV and VI	2(4)	2(4)	2(4)	Fruit Harvesting (Hort. VI.)	.....	.....	2
Agricultural Lectures	(2)	(2)	(2)	Chemistry (Chem. III.)	3	.....	.....
Arithmetic	3	.....	.....	Plant Pathology (Bot. VIII.)	.....	2(4)	.....
Mechanical Drawing (M. E. I.)	.....	(6)	.....	Economic Entomology (Ent. IV.)	.....	.....	2(4)
Entomology (I.)	.....	.....	2(4)	Fruit Growing (Hort. III.)	2(2)	2(2)	.....
Gardening (Hort. II.)	.....	.....	2(3)	Small Fruit Growing (Hort. IV.)	.....	.....	2(2)
.....	.....	.....	.....	Systematic Pomology (Hort. V.)	2(2)	.....	2(2)
.....	.....	.....	.....	Plant Breeding (Hort. X.)	.....	2	2
.....	.....	.....	.....	*Greenhouse Construction (Hort. VII.)	.....	1(3)	.....
.....	.....	.....	.....	*Floriculture (Hort. VIII, IX.)	.....	3(2)	3(2)
.....	.....	.....	.....	*Landscape Gardening (Hort. XI.)	2(2)	2(2)	.....
.....	.....	.....	.....	Freehand Drawing (M. E. II.)	(6)	.....	.....
.....	.....	.....	.....	Farm Crops (Agron. IV.)	2(4)	.....	2(2)

*As needed.

MECHANICAL ENGINEERING COURSE.

The work of the several years of this course differs from the preceding courses (Agricultural, Horticultural and General Science) mainly in the omission of those subjects of a biological character and inclusion of mathematics and shop work. The shop work supplements the mathematical, especially in the last two years, when problems in machine design are worked out, so far as time allows, in the actual construction of the parts designed. The practical work of this course is most thorough. The student is familiarized from the first with the use of tools and implements used in wood and iron work. He is given daily practice in the shops, and is encouraged to develop whatever inventive talent he may have. Results have shown that students completing this course have no difficulty in securing employment immediately upon graduation in the field of mechanics or mechanical engineering.

Mechanical Engineering Course.

Freshman.	Terms. I.	II.	III.
Elementary Mathematics (Math. I.)	3	.....	.....
Algebra (Math. II.)	5	8	3
Plane Geometry (Math. III.)	.....	.....	5
Language and Composition (Engl. I.)	5	5	5
American Literature (Engl. II.)	.....	.....	3
*General History (Hist. I.)	4	4	.....
*English History (Hist. II.)	.....	.....	4
*Latin Grammar and Composition (Lat. I.)	4	4	4
Elocution I. and II	1	2	.....
Physical Culture	(3)	(3)	.....
Mechanical Drawing (M. E. I.)	(6)	(6)	(6)
Technical Instruction (M. E. III.)	3	.....	.....
Wood Work (M. E. IV.)	(6)	(6)	(6)
.....	.....	.....	.....
.....	.....	.....	.....

Sophomore.	Terms. I.	II.	III.
Plane Geometry (Math. III.)	5	.....	.....
Trigonometry (Math. IV.)	.....	5	.....
Solid Geometry (Math. V.)	.....	.....	5
Rhetoric and Composition (Engl. II.)	4	4	.....
English Literature (Engl. V.)	.....	.....	3
Elocution III. and IV.	1	2	.....
General Chemistry (Chem. I.)	4(3)	4(4)	4(3)
Physics, Elementary (Phys. I.)	4	.....	.....
Mechanics, Elementary (C. E. I.)	.....	3	.....
Mechanical Drawing (M. E. V.)	(6)	.....	.....
Applied Mechanics (M. E. VI.)	4	.....	.....
Blacksmithing (M. E. VII.)	(4)	(4)	.....
Foundry Work (M. E. VIII.)	.....	.....	(8)
Descriptive Geometry (M. E. IX.)	.....	3(4)	3(4)
German Grammar and Comp. (Germ. I.)	.....	.....	5

Junior.			
Analytical Geometry (Math. VI.)	5	.....	.....
Calculus (Math. VII.)	.....	5	5
English Composition (Engl. VI.)	1	1	1
Civics I	.....	3	3
German Translation (Germ. II.)	3	3	3
Machine Design (M. E. X.)	2(4)	2(4)	2(4)
Machine Work (M. E. XI.)	(6)	(6)	(6)
Steam Engines (M. E. XII.)	4	.....	.....
Physics II	4(4)	4(4)	4(4)
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Senior.			
English Composition (Engl. XI.)	1	1	1
Current Topics (Hist. III.)	.....	.....	1(1)
Political Economy (Civics II.)	3	4	.....
Business Law (Civics III.)	.....	.....	4
*Scientific German (Germ. III.)	4	4	4
*French	.....	5	4
Power Plants (M. E. XIII.)	.....	3	.....
Machine Design (M. E. XIV.)	2(4)	2(4)	2(4)
Graphic Statics (M. E. XV.)	4	.....	.....
Machine Work (M. E. XVI.)	(8)	(8)	(8)
Experimental Engineering (M. E. XVII.)	.....	.....	3(3)
Strength of Materials (C. E. VIII.)	4	.....	.....
Wood Technology (For. III.)	.....	1	.....
Research and Thesis	.....	‡	‡

*Latin and History, and German and French alternative.
‡As required.

SYNOPSIS OF COURSES—FRESHMAN YEAR.

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The courses are represented by the following abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E., Civil Engineering; E. E., Electrical Engineering; M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM			SECOND TERM			THIRD TERM			
	Ch., G. S. Ag., A. H. H.	C. E.	M. E., E. E.	Ch., G. S., Ag., A. H., H.	C. E.	M. E., E. E.	Ag., A. H., H., G. S.,	Ch.	C. E.	M. E., E. E.
Elementary Mathematics (Math. I.)	3	3	3							
Algebra (Math. II.)	5	5	5	8	8	8	3	3	3	3
Plane Geometry (Math. III.)							5	5	5	5
Language and Composition (Engl. I.)	5	5	5	5	5	5	5	5	5	5
American Literature (Engl. II.)							3	3	3	3
*General History (Hist. I.)	4	4	4	4	4	4				
*English History (Hist. II.)							4	4	4	4
*Latin Grammar and Composition (Latin I.)	4	4	4	4	4	4	4	4	4	4
Elocution I and II	1	1	1	2	2	2				
Physical Culture	(3)	(3)	(3)	(3)	(3)	(3)				
Geology	4	4		5	5					
Agricultural Lectures	(2)			(2)			(2)	(2)		
Elementary Botany (Bot. I.)				2(4)						
Systematic Botany (Bot. II.)							2(4)	2(4)		
Mechanical Drawing (M. E. I.)		(6)	(6)		(6)	(6)		(6)	(6)	(6)
Freehand Drawing (M. E. II.)	(6)									
Technical Instruction (M. E. III.)			3							
Wood Work (M. E. IV.)			(6)			(6)	(6)		(6)	(6)

*History and Latin alternative.

SYNOPSIS OF COURSES—SOPHOMORE YEAR.

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The different courses are represented by the following abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E., Civil Engineering; E. E., Electrical Engineering; M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM.				SECOND TERM.					THIRD TERM.				
	Ag., A. H., H., G. S.	Ch.	C. E.	E. E., M. E.	Ag., A. H., H., G. S.	Ch.	C. E.	E. E.	M. E.	Ag., A. H., H., G. S.	Ch.	C. E.	E. E.	M. E.
Plane Geometry (Math III.)	5	5	5	5										
Trigonometry (Math. IV.)					5	5	5	5	5					
Solid Geometry (Math. V.)										(1)	5	5	5	5
Rhetoric and Composition (Engl. IV.)	4	4	4	4	4	4	4	4	4					
English Literature (Engl. V.)										3	3	3	3	3
American Literature (Engl. III.)											2(2)	2(2)		
Elocution III. and IV.	1	1	1	1	2	2	2	2	2					
General Chemistry (Chem. I.)	4(3)	4(3)	4(3)	4(3)	4(4)	4(4)	4(4)	4(4)	4(4)	4(3)	5(7)	4(3)	4(3)	4(3)
Physics, Elementary (Phys. I.)	4	4	4	4										
Electricity, Elementary (E. E. I.)								2					2	
Mechanics, Elementary (C. E. I.)							3	3	3					
Architectural Drawing (C. E. II.)							(4)							
Surveying, Elementary (C. E. III.)										2(4)				
Mechanical Drawing (M. E. V.)	(6)		(6)	(6)										
Applied Mechanics (M. E. VI.)			4	4										
Blacksmithing (M. E. VII.)			(4)	(4)					(4)					
Foundry Work (M. E. VIII.)													(4)	(8)
Descriptive Geometry (M. E. IX.)							3(4)	3(4)	3(4)			3(4)	3(4)	3(4)
Plant Propagation (Hort. I.)	2(2)	2(2)			3	3								
Agricultural Lectures	(2)	(2)			(2)	(2)				(2)	(2)			
Farm Crops (Agron. I.)										3(4)				
French Grammar and Composition (Fr. I.)		4												
French Translation (Fr. II.)						4					3			
Plant Physiology (Bot. III.)					2(4)									
Microscopy and Animal Histol. (Vet. Sci. I.)					(6)	(6)								
Entomology I.										2(4)				
German Grammar and Comp. (Germ. I.)										5(1)	5(1)	5(1)	5(1)	5(1)

SYNOPSIS OF COURSES—JUNIOR YEAR.

The figures represent the number of recitation periods per week, those in parenthesis indicating practical or laboratory work. The different courses are represented by the abbreviations: Ag., Agronomy; A. H., Animal Husbandry; H., Horticultural; Ch., Chemical; C. E., Civil Engineering; M. E., Mechanical Engineering; G. S., General Science.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM.							SECOND TERM.							THIRD TERM.						
	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.
Analytical Geometry (Math. VI.)					5	5															
Calculus (Math. VII.)												5	5						5	5	
English Composition (Engl. VI.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
*English Literature (Engl. VII.)			3				*3			2				2							
Civics I.								3	3	3	3	3	3	3	3	3	3	3	3	3	3
*Logic (Engl. VIII.)																					*3
German Translation (Germ. II.)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Machine Design (M. E. X.)						2(4)							2(4)							2(4)	
Machine Work (M. E. XI.)						(6)							(6)							(6)	
Steam Engines (M. E. XII.)						4															
Physics II.				4 (4)	4(4)	4(4)	4(4)				4 (4)	4(4)	4(4)	4(4)				4 (4)	4(4)	4(4)	4(4)
Elementary Organic Chemistry (Chem. II.)	3	3	3	3			3														
Qualitative Analysis (Chem. III and IV.)	1(6)	1(6)	1(6)	1(12)			1(6)														
Inorganic Preparations (Chem. V.)				(4)																	
Theoretical Chemistry (Chem. VI.)				2																	
Quantitative Analysis (Chem. VII, VIII.)								1(4)	1(4)		1(12)			1(4)	1(4)	1(4)					1(4)
Mineralogy (Chem. IX.)								1(4)			1 (4)			1(4)							
Organic Chemistry (Chem. X.)									3		3					3		3			
Volumetric Analysis (Chem. XII.)																		2(16)			
Surveying (C. E. IV.)					3(5)							3(2)							2(4)		
Topographical Drawing (C. E. V.)					(6)							(6)							(4)		
Railway Engineering (C. E. VI.)																			2		
Zoology (Entom. II.)		3(3)					3(6)														
*Systematic Entomology (Entom. III.)							*2(4)										2(4)				*2(4)
Economic Entomology (Entom, IV.)																					2(4)
Anatomy and Physiology (Vet. Sci. II.)									3(6)					3(6)							
Plant Histology (Bot. IV.)										(8)											
Plant Morphology and Classif. (Bot. V.)			1(3)																		2(4)
Economic Plants (Bot. VI.)															2(4)		2(4)				
Agricultural Lectures	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)
Farm Crops (Agron. I.)								2(2)							2(4)						
Soils (Agron. II.)	2(2)	2(2)	2(2)					3(4)	3(4)	3(4)											
Farm Drainage (Agron. III.)															2(2)	2(2)	2(2)				
Breeds and Scoring (A. H. I.)	3(4)	3(4)																			
Principles of Breeding (A. H. II.)	3	3																			
Live Stock Management (A. H. III.)								2	2												
Dairying (A. H. IV.)																2(2)					
Olericulture (Hort. II.)																3(4)					
Pomology (Hort. III.)	2(2)		2(2)					2(2)		2(2)					2(3)		2(3)				
Floriculture (Hort. VIII, IX.)										3(2)											
Research (Hort. XII, A. H. IX.)																(2)	3(2) (2)				

* General Science Students take English Literature in the First Term and Logic in the Third Term instead of Systematic Entomology if they expect to pursue Botanical courses the next year.

SYNOPSIS OF COURSES—SENIOR YEAR.

The figures represent the number of recitation periods per week. Those in parenthesis indicating practical or laboratory work. The different courses are represented, as on preceding page, by the abbreviations: Ag., A. H., H., Ch., C. E., M. E., G. S.

The Roman numerals below are the numbers of the courses described in the various departments on preceding pages.	FIRST TERM.							SECOND TERM.							THIRD TERM.						
	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.	Ag.	A. H.	H.	Ch.	C. E.	M. E.	G. S.
*English Classics (Engl. IX.)	4	4	*4				4	4						4	4						4
*Psychology (Engl. X.)	4	*4	4				4														
English Composition (Engl. XI.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Current Topics (Hist. III.)															1(1)	1(1)	1(1)	1 (1)	1 (1)	1(1)	1(1)
Political Economy (Civics II.)	3	3	3	3	3	3	3	4	4	4	4	4	4	4							
Business Law (Civics III.)															4	4	4	4	4	4	4
*Scientific German (Germ. III.)	4	*4	*4	4	4	4	4				4	*4	*4	*4				4	*4	*4	*4
*French												*5	*5	*5					*4	*4	*4
Organic Chemistry (Chem. X.)				3																	
Organic Preparations (Chem. XI.)											(16)										
Agricultural Chemistry (Chem. XIII.)	3	3	3	3																	
Agricultural Analysis (Chem. XIV.)				(20)																	
Indus., Phys. and Elec. Chem. (Chem. XV.)											6 (4)							5			
Quantitative Analysis (Chem. VIII.)	(4)	(4)																			
Power Plants (M. E. XIII.)													3								
Machine Design (M. E. XIV.)						2(4)							2(4)							2(4)	
Graphic Statics (M. E. XV.)					4	4															
Machine Work (M. E. XVI.)						(8)							(8)							(8)	
Experimental Engineering (M. E. XVII.)																				3(3)	
Structural Design (C. E. VII.)					2(4)							2(4)							2 (4)		
Strength of Materials (C. E. VIII.)					4	4															
Hydraulics (C. E. IX.)												5									
Railway Engineering (C. E. VI.)					2																
Highway Engineering (C. E. X.)																			3		
Field Engineering (C. E. XII.)					(8)							(8)							(12)		
Estimates of Cost (C. E. XV.)																			1		
Mycology (Bot. VII.)			2(2)																		
Vegetable Pathology (Bot. VIII.)								2(4)		2(4)											
†Botany IX. and Entomology V							†13		4(6)					†13							†13
Veterinary Science (Vet. Sci. III.)																					
Agricultural Lectures	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)	(2)	(2)	(2)	(2)			(2)
Plant Production (Agron. IV.)	3(4)																				
Fertilizers (Agron. V.)								3(4)													
Farm Machinery (Agron. VI.)															2(4)		(4)				
Farm Management (Agron. VII.)															2	2					
Crop Prod. (Ag. VIII.) or Soils (Ag. IX.)															2(4)						
Stock Judging (A. H. V.)		(4)																			
Herdbook (A. H. VI.)		2(2)																			
Animal Nutrition (A. H. VII.)									4							4(4)					
Farm Forestry (For. II.)								3	3	3				*3							
Wood Technology (For. III.)												1	1								
Pomology, Systematic (Hort. V.)			2(2)														2(2)				
Small Fruits (Hort. IV.)																2(2)	2(2)				
Fruit Harvesting, Etc. (Hort. VI.)										2							2				
Greenhouse Construction (Hort. VII.)										1(3)											
Plant Breeding (Hort. X.)								2		2				2	2		2				
Landscape Gardening (Hort. XI.)			2(2)							2(2)											
Research and Thesis	(2)	(2)	(4)					2(4)	2(4)	(4)			‡		2(4)	4(4)	(8)	(20)		‡	

*Animal Husbandry students take either Psychology or German; Horticultural students take either English Classics or German; Engineering and

SYNOPSIS OF TWO-YEAR COURSES IN AGRICULTURE AND HORTICULTURE.

The figures represent the number of recitation periods per week; those in parenthesis indicating practical or laboratory work.
The Roman numerals below are the numbers of courses described in the various departments on preceding pages.

	FIRST YEAR.					
	FIRST TERM.		SECOND TERM.		THIRD TERM.	
	Agrl.	Hor.	Agrl.	Hor.	Agrl.	Hor.
English Composition (Engl. I.)	5	5	5	5	5	5
Plant Culture (Hort. I.)	2(2)	2(2)	3	3	....	.....
Farm Crops (Agron. I.)	2(4)	2(4)	.....	.....	2(4)	.....
Soils (Agron. II.)	2(2)	2(2)	3(4)	3(2)	....	.....
Drainage (Agron. III.)	.....	.....	.....	.....	2(2)	2(2)
General Chemistry (Chem. I.)	4(3)	4(3)	4(4)	4(4)	4(3)	4(3)
Breeds and Scoring (A. H. I.)	3(4)	.....	.....	.....	.....	.....
Live Stock Management (A. H. III.)	.....	.....	2	.....	2(2)	.....
Botany I., II., III., IV. and VI.	.....	2(4)	.....	2(4)	2(4)	2(4)
Agricultural Lectures	(2)	(2)	(2)	(2)	(2)	(2)
Arithmetic	.....	3	.....	.....	....	.....
Mechanical Drawing (M. E. I.)	.....	.....	.....	(6)	....	.....
Entomology I	.....	.....	.....	.....	....	2(4)
Gardening (Hort. II.)	.....	.....	.....	.....	....	2(3)
Anatomy and Physiology (Vet. Sci. II.)	.....	.....	(9)	.....	....	.....

	SECOND YEAR.					
	FIRST TERM.		SECOND TERM.		THIRD TERM.	
	Agrl.	Hor.	Agrl.	Hor.	Agrl.	Hor.
Farm Management (Agron. VII.)	.....	.....	.....	.....	2	....
Principles of Breeding (A. H. II.)	3	.....	.....	.....	.....	....
Stock Judging (A. H. V.)	(4)	.....	.....	.....	.....	....
Fertilizers (Agron. V.)	.....	.....	3(4)	3(4)	.....	....
Farm Machinery (Agron. VI.)	.....	.....	.....	.....	2(4)	2(4)
Animal Nutrition (A. H. VIII.)	.....	.....	4	.....	.....	....
Grain Judging (Agron. I.)	.....	.....	1(4)	.....	.....	....
Agricultural Lectures	(2)	(2)	(2)	(2)	(2)	(2)
Wood Work (M. E. IV.)	(6)	.....	.....	.....	.....	....
English Composition (Engl. VI.)	1	1	1	1	1	1
Business Law (Civics III.)	3	.....	.....	.....	.....	....
Farm Forestry (For. II.)	.....	.....	3	3	.....	....
Pomology (Hort, III.)	2(2)	2(2)	2(2)	2(2)	.....	....
Fruit Harvesting (Hort. VI.)	.....	.....	.....	.....	2	2
Vegetable Gardening (Hort, II.)	.....	.....	.....	.....	2(3)	....
Chemistry (Chem. II.)	.....	3	.....	.....	.....	....
Plant Pathology (Bot. VIII.)	.....	.....	.....	2(4)	.....	....
Economic Entomology (Ent. IV.)	.....	.....	.....	.....	2(4)	2(4)
Fruit Growing (Hort. III.)	.....	2(2)	.....	2(2)	.....	....
Small Fruit Growing (Hort. IV.)	.....	.....	.....	.....	.....	2(2)
Systematic Pomology (Hort. V.)	.....	2(2)	.....	.....	.....	2(2)
Plant Breeding (Hort. X.)	.....	.....	.....	2	.....	2
*Greenhouse Construction (Hort. VII.)	.....	.....	.....	1(3)	.....	....
*Floriculture (Hort. VIII. and IX.)	.....	.....	.....	3(2)	.....	3(2)
*Landscape Gardening (Hort. XI.)	.....	2(2)	.....	2(2)	.....	....
Freehand Drawing (M. E. II.)	.....	(6)	.....	.....	.....	....
Dairying (A. H. IV.)	.....	.....	.....	.....	3(4)	....
Farm Crops (Agron. IV.)	4(4)	2(4)	.....	.....	2(2)	2(2)
Veterinary Science (Vet. Sci. III.)	.....	.....	4(6)	.....	.....	....

*As needed.

GENERAL INFORMATION.

REQUIREMENTS FOR ADMISSION.

For admission to the College Department, Freshman Class, an entrance examination is required. This examination will be held at the College on September 15th and 16th, 1908. The applicant will be expected to pass a satisfactory examination in the following subjects: English grammar, composition and analysis, United States history, arithmetic complete, algebra, as far as quadratics, political and physical geography. A mark of seventy per cent. is necessary to pass. For entrance to the Preparatory Department the requirements are: English grammar, arithmetic, as far as percentage, United States history and political geography.

Applicants for admission to higher classes than the Freshman must be prepared to take an examination equivalent to that given at the College for promotion to such classes, or must present a certificate from county or city schools covering the work of the lower College classes as hereinbefore stated. Experience has proven that it is almost impossible for a new student to succeed in the work of the mechanical course as a Sophomore; and such assignment will be made only upon the candidate presenting satisfactory evidence of proficiency in drawing and wood work.

Every applicant for admission to the College must bring satisfactory testimonials as to his character and scholarship from his former teacher. *This will be absolutely insisted upon. No student need apply for entrance who cannot furnish such credentials.*

Students from newly acquired territory or any foreign country must have a guardian appointed with parental powers, with whom the President can deal in any case of emergency. Students who cannot speak English are undesirable, and are advised that satisfactory progress at this College on their part cannot be expected until they have familiarized themselves partly, at least, with the English language.

EXAMINATIONS AND PROMOTIONS

In order to pass from one class to the next higher a student is required to pass an examination in each study pursued by a mark of at least sixty per cent., and to have a combined mark in each branch (daily and examination) of at least seventy per cent. A failure in not more than one branch will enable a student to pass to the next class with condition in that study in which he has failed; but in every case the student is required to make good such failure during the next year. However, no student in the Mechanical or Civil Engineering Courses will be promoted to the Junior Class, who is deficient in Sophomore Mathematics.

For rules for military promotions see Military Department.

REPORTS.

Detailed reports are sent to parents and guardians at the end of every quarter. These give the grade of the student in every branch of study, his attendance record, and his conduct record with comment by the President upon each item.

In addition to this, monthly reports are issued for October, November, January, February and April. These give general information as to scholarship, conduct, attendance and health, and call attention to deficiency in any one of these particulars.

GRADUATION AND DEGREES.

BACHELOR OF SCIENCE.

As a requisite for graduation, the candidate for this degree must, in addition to having satisfactorily completed the work previously outlined, submit a thesis, which meets the approval of the Faculty.

The subject for this thesis must be approved by the head of the department in which the investigation is to be pursued prior to February 1st, and the thesis completed must be submitted not later than May 15th.

MASTER OF SCIENCE.

The degree of Master of Science may be conferred by the Faculty as follows:

1. Upon students who have completed the undergraduate course, and in addition have pursued a successful course of graduate study for one year at this College, consisting of a major and two minor subjects, not more than one of which shall be taken in the same department of the College, and to occupy not less than thirty hours per week. The course of study to be outlined by the professor in charge of the major subject, and approved by the Faculty.

2. Upon college graduates of not less than two years' standing, who are employed in any of the departments of the College, and who have completed the equivalent of the above course of study. Candidates under this clause must have their applications approved by the Faculty eighteen months before they contemplate receiving their degree.

3. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course equivalent to (1) and who have passed in the required examinations and have presented a satisfactory thesis.

MASTER OF ARTS.

The degree of Master of Arts may be conferred upon graduates of this College holding the Bachelor of Arts degree, and who conform to the following rules:

1. The candidate must apply for the degree in writing at least one scholastic year before the degree will be conferred. The application must contain a description of the extra work, by virtue of which the candidate expects to receive the degree.

2. The candidate must submit one or more theses on subjects assigned by the Professor of English and Civics; said thesis or

theses must be approved by the President of the College, the Professor of English and Civics and the Professor of Languages of this College.

3. The candidate must be prepared to submit to an examination in the works of the following authors: Cæsar, Nepos, Sallust, Virgil, Cicero, Ovid, Horace, Livy, Tacitus, Plautus, Terence, Juvenal.

MECHANICAL ENGINEER.

The degree of Mechanical Engineer (M. E.) may be conferred by the Faculty as follows:

1. Upon graduates of this College of not less than three years' standing, who having been connected with institutions of learning or research, where adequate facilities for advanced work are available, have completed a course consisting of a major and two minor subjects, and who have passed the required examination and presented a satisfactory thesis. (The course of study to be outlined by the heads of the Departments of Civil, Electrical and Mechanical Engineering, and approved by the Faculty).

2. Upon graduates of this College who have had three years' professional experience of an acceptable character. Such candidates must present to the Faculty a full report of such experience, and such other information as to the qualifications for the degree as may be found desirable, and in addition shall present a satisfactory thesis.

3. All candidates must be at least Junior members of the American Society of Mechanical Engineers. All applications for degrees must have the approval of the Faculty twelve months prior to the date they contemplate receiving the degree, and the thesis must be presented at least one month prior to such date.

CIVIL ENGINEER.

The degree of Civil Engineer may be conferred upon any candidate who is a graduate of this College with the degree of Bachelor of Science in Civil Engineering, and has been engaged in engineering pursuits for not less than three years since graduation, provided:

1. That he shall be a member of the American Society of Civil Engineers.

2. That he shall accompany his application with a synopsis of the work upon which he bases his request.

3. That the Committee composed of the heads of Civil, Electrical and Mechanical Engineering Departments, to whom his application shall be referred, shall consider him eligible.

4. That previous to receiving the degree he shall comply with such further conditions, if any, as the aforesaid committee shall impose.

SCHOLARSHIPS AND FELLOWSHIPS.

COMPETITIVE SCHOLARSHIPS.

The College offers a number of scholarships—four for Baltimore City, and one for each county of the State. These scholarships are awarded to the successful candidate in competitive examinations, conducted in Baltimore City, by the Superintendent of Public Instruction, and in the counties by the County School Superintendent. All scholarship students must be prepared for entrance to the Freshman Class, and are required to take the regular entrance examination. Each scholarship is good for four years, or for such part thereof as the holder remains at the College. It is then again open for competition. The cost per year for scholarship students will be found under the head of "Student Expenses." The following is an extract from the requirements of the Board of Trustees, relating to scholarships:

"Persons holding certificates of scholarship must present themselves at the College, or other designated place, at the date which may be named in the September or January next following the award, and be examined by College authorities for entrance to the Freshman Class. Alternates are to be thus examined, as well as principals, and in case of a failure of the principal to secure or hold the scholarship, the alternate will have the first right to the place declared vacant, if within a year from date of the certificate of award.

"Persons holding certificates of scholarship must, in order to secure the same, pass the entrance examination of the College, and (if entering in January) such other examination as may be required to join *the Freshman Class. To hold a scholarship, the student must make all payments promptly, and meet such requirements of the College as to scholarship and deportment as may be prescribed by the President and Faculty. By passing special examinations, or by presenting satisfactory certificates, candidates for scholarship may be permitted to enter the Sophomore Class.*" A student who fails of promotion, thereby forfeits his scholarship and the School Board which granted such scholarship will be notified accordingly.

INDUSTRIAL SCHOLARSHIPS.

There are also offered by the College a limited number of "Industrial Scholarships." The holder of such a scholarship is required to work as a waiter or janitor a definite number of hours per day; these hours are so arranged as to conflict as little as possible with his time for study or recitation. Industrial scholarship students are not required to drill.

In consideration of their work a rebate of $140 a year is granted each of these students.

A selection is made from applicants for these scholarships on the basis of mental preparation, physical ability and moral character. Preference will be given to the sons of citizens of Maryland. Applications for this scholarship specifying age, weight, mental advancement and enclosing testimonial of moral character must be made in writing to the President of the College prior to September 1st, and the successful applicants for this scholarship will be notified to report in person at the College in September.

STUDENT OPPORTUNITIES.

A limited amount of money can be earned by students by taking advantage of the opportunities arising from time to time to do clerical work, tutoring, and such other labor as may not interfere with regular scholastic duties. Those in need of help to continue their work, and whose course is marked by an earnest desire to succeed, are always given the preference.

FACILITIES FOR RELIGIOUS WORSHIP.

The College is undenominational in character. The daily exercises of the College are opened with worship in the College Chapel.

Every Sunday afternoon services are conducted by a minister of some Christian denomination, an effort being made to have all the more prominent churches represented in the pulpit. There is an Episcopal Church at College Park; and at Berwyn, one mile north, and at Riverdale, one mile south, are Presbyterian churches. In Hyattsville, two miles south, may be found Catholic, Episcopal, Presbyterian, Baptist and Methodist churches. Students are encouraged to attend the church with which they desire to worship.

COLLEGE REGULATIONS.

The attention of parents is earnestly called to the following rules in force at this College: The College authorities can succeed in conferring the maximum amount of training upon the student only with and by the active support and earnest co-operation of the parent. The President of the College is always ready and willing to discuss any failures in a student's record with his parent or guardian, and correspondence on this subject is always welcome.

Three reports are sent to parents during the year, showing the student's progress in class work, and his general standing, as to conduct, etc. At the end of the year a detailed report of the year's work is made.

No student will be accepted as a matriculate until the contract card containing the following agreement for matriculation is signed by parent or guardian, and received by the President of the College:

"It is understood that the President of the College as the executive of the same, and acting for the Board of Trustees, a party to this contract, *has the right to ask the withdrawal of a student at any time, when in his judgment such withdrawal may be necessary either for the interest of the young man or the institution which he attends. It is further understood that a parent or guardian can at any time withdraw his son or ward, subject to regulations herein set forth.*"

A cadet manifesting an indifference to the observance of the rules and regulations of the institution, or wanting in proper attention to the preparation of his work, will be cautioned to improve in these particulars. Failing to do so his parents, upon notice given by the President, must withdraw their son.

A special pledge to refrain from what is popularly known as "hazing," and from taking unfair means in examinations is required of every applicant for entrance, before he will be allowed to matriculate. Parents should impress upon their sons that failure to live up to this pledge is a dishonor which unfits them to be longer students of the College. *"Hazing" is invariably punished by instant dismissal.*

Frequent absences from the College are invariably of great disadvantage to the student, in breaking in upon the continuity of his work, and in distracting his mind from the main purpose of his attendance at the institution. Parents are therefore earnestly asked to refrain from granting frequent requests to leave the College.

Students will not be permitted to leave classes or quarters during study hours to answer telephone calls, unless they are urgent.

Students will not be permitted to make contracts or to sell any article to their associates without the approval of the President.

The sale of second-hand furniture or clothing to new cadets is prohibited unless the sale be approved by the commandant of cadets.

The College will not be responsible for articles left in the barracks during vacation, nor for valuables left by students in their rooms at any time. They should be deposited with the College Treasurer, who will place them in the College safe and give a receipt therefor.

RULES OF COMMITTEE ON COLLEGIATE ROUTINE, ENDORSED BY THE FACULTY.

1. A student may not change his course of study unless at the written request of his parent or guardian, and after said request has been endorsed by the dean of the course abandoned, and the dean of the course requested, and approved by this committee.

2. Examinations to make up conditions will be given only at times set apart by this committee. These dates will be just before the regular quarterly examinations in December, March and June; also the day before the resumption of college work in September. Notice of intention to take these examinations must be filed in writing with the chairman of the schedule committee at least 10 days before examinations commence. Should, for any reason, a special examination be requested at any other time a charge of $2.00 will be made for each subject on which the applicant is examined.

3. To attain proficiency a student must make an examination grade of 60 per cent.; also a term average of 70 per cent. In case of failure, upon re-examination, a grade of 70 per cent. is required.

4. A student may not be promoted if conditioned in more than one study.

5. A student may not be promoted if he has any conditions of more than a year outstanding.

6. No student may be promoted from the Preparatory Department with any condition.

7. Any student who uses unfair means in examination will (1) receive no further examination in same subject; (2) receive zero for examination grade; (3) receive no commission; (4) receive no diploma.

8. A student is subject to an oral examination at any time within ten days after written examination.

9. An examination paper, containing erasure or showing alterations, may be rejected at the discretion of the Professor in charge, and a new examination ordered by this committee.

10. In computing term averages, the daily grade is computed at 2, the examination grade at 1.

11. The yearly average in all studies is computed by giving each subject a weight according to the mean number of hours per week involved; theoretical periods being given a value of 2, practical periods 1.

12. Senior students must submit subjects for graduating theses prior to February 1, and all theses for graduation must be completed prior to May 15.

13. No special courses are permitted save by consent of this committee. In case consent is granted for a special course, the certificate awarded attesting work will not have the College seal nor the Governor's signature.

14. No student may take work in more than one class during any one term.

STUDENT EXPENSES.

No charge is made to boarding students for tuition, books or diplomas. No reductions are made for regular vacations.

The expenses of the College year for the several classes of students are as follows:

Boarding Students.—Board, heat, light and room, $60.00 per quarter.

Scholarship Students.—Board, heat, light and room, $30.00 per quarter.

Day Students.—Room, heat and tuition, $12.50 per quarter.

Short Winter Course Students.—Board, heat, light and room, for the course, $40.00.

Students entering College after November 1st, or leaving the same prior to the close of the scholastic year, will be charged for the time they are here, as follows, viz:

Boarding students at the rate of $30.00 per month.

Scholarship students at the rate of $15.00 per month.

Day students at the rate of $6.00 per month.

Students withdrawing after entrance, must pay the charge for at least one month's attendance.

Table board for students not rooming at the College will be $14.00 per month, or 25 cents per meal.

TIME OF PAYMENT.

For Boarding Students, $60.00 on entrance, $60.00 November 15th, $60.00 February 1st, $60.00 April 1st.

For Scholarship Students, $30.00 on entrance, $30.00 November 15th, $30.00 February 1st, $30.00 April 1st.

For Day Students, $12.50 on entrance, $12.50 November 15th, $12.50 February 1st, $12.50 April 1st.

Promptness of payment is essential, and must be made in advance, by order of the Board of Trustees.

FEES.

No fees of any character will be charged by the College.

Students will be admitted free of cost to membership in the College Athletic Association.

Damage to College property by students will be promptly reported to parents or guardians and prompt payment expected.

All College property in the possession of the individual student, such as his room, furniture, books, apparatus and military equipment, will be charged against him, and the parent or guardian must assume responsibility for its return without abuse, to the proper department at the end of each scholastic year, at which time the account will be cancelled. If abused, the cost of replacing or repairing the abused article, must be paid by the parent or guardian.

Damage to College property in public places in the building and on the grounds by the students will be charged to the whole student body, pro rata, unless the offender is known. In such cases, the whole expense of repairing or replacing the damaged property will be charged to the parent or guardian of the offending party. The matriculation of a student is evidence of the acceptance of this regulation.

Coaching for backward students will be provided by the President upon application.

UNIFORM.*

Dress Uniform (coat, trousers and cap)	$15.60
Khaki Uniform (coat, trousers, hat and leggins)	5.50
Shirt and belt	1.25

Payments for uniforms must be made on delivery. This is required by the firm manufacturing them.

ARTICLES NECESSARY TO BE PROVIDED.

All students are required to provide themselves with the following articles, to be brought from home or purchased from the College Park store on arrival:

1 dozen white standing collars.
6 pairs white gloves (uniform).
6 pairs white cuffs.

*Price quoted on basis of last year's contract.

1 pair blankets (for single bed).
2 pairs sheets (for single bed).
4 pillow cases.
2 white dimity bedspreads (three quarters size).
6 towels.
1 chair (uniform).
1 pillow.
1 mattress (uniform).

The room-mates together purchase the following articles:

2 table cloths (uniform).
2 clothes bags (uniform).
1 broom.

All the articles marked (uniform) in the foregoing list can best be purchased after the student arrives at the College. The cost of the entire list should not be more than $15.00 for the year. This should be paid to the Treasurer on entrance, as the College has no fund from which it can make advances, and failure to comply with this requirement will subject the student to much inconvenience. Any unexpended balance will be returned promptly.

STUDENT ORGANIZATIONS.

Students clubs for religious, social, literary and athletic purposes are encouraged as a means of creating class and college pride and developing an *esprit de corps* among the students. Each class has its own organization, in which matters relating to the class are discussed and directed. Officers are elected and the unity of the class preserved. This has been found to be a decided aid to discipline and tends to raise the standard of student honor.

YOUNG MEN'S CHRISTIAN ASSOCIATION.

President, R. Brigham.
Vice-President, W. C. Reeder.
Secretary, J. P. Shamberger.
Treasurer, N. L. Warren.

Much encouraging work has been done by this organization during the past year, and much interest has been shown in the meetings.

LITERARY SOCIETIES.

These societies are invaluable adjuncts to college work. Through them a good knowledge of parliamentary law is gained, as well as a readiness of expression and activity in thought, qualities particularly valuable to the American citizen.

The Literary Society work is under the general supervision of the Professor of Oratory, who is always ready to advise with the members in matters of parliamentary law and train them in the delivery of their orations and debates.

NEW MERCER SOCIETY.

President, U. W. Long.
Vice-President, S. M. Lowrey.
Secretary-Treasurer, J. W. Firor.
Sergeant-at-Arms, G. C. Day.

MORRILL SOCIETY.

President, R. Brigham.
Vice-President, N. L. Warren.
Secretary-Treasurer, H. B. Hoshall.

ROSSBURG CLUB.

The social man is a necessity—hence this organization is encouraged and supported by the President and Faculty. The entertainments have been marked by a spirit which emphasizes the wisdom of its continuance and justifies its encouragement.

President, C. W. Sylvester.
Vice-President, T. B. Mackall.
Secretary, U. W. Long.
Treasurer, W. A. S. Somerville.

"REVEILLE."

The "Reveille" is the College annual, edited entirely by the Senior class. Eleven editions of the "Reveille" have appeared, and each has been characterized by a gratifying improvement in the standard both of originality and expression.

EDITORIAL STAFF, 1908.

Editor-in-Chief, R. Brigham.
Associate Editors, W. H. Thomas, J. P. Shamberger, G. C. Day.
Business Manager, N. L. Warren.
Associate Business Managers, T. B. Mackall, L. B. Broughton, S. W. Lowrey.
Treasurer, W. A. S. Somerville.

DEPARTMENT EDITORS.

Athletic, U. W. Long.
Humorous, W. C. Reeder.
Social, J. W. Firor.
Class History, J. P. Shamberger.

THE ORATORICAL ASSOCIATION OF MARYLAND COLLEGES.

The Maryland Agricultural College is a member of this Association, which is composed of St. John's College, Washington College, Western Maryland College and Maryland Agricultural College. Contests are held annually at these colleges in rotation, and a marked improvement is to be observed as a result of its organization.

THE ALUMNI ASSOCIATION.

"The Alumni Association is steadily growing in two ways; that is to say, recent graduates almost invariably become active members, and the graduates of the earlier days of the College are becoming more active and more interested in all that pertains to the welfare of their Alma Mater.

The semi-centennial celebration, which occurred March 6, 1906, had for one of its results the bringing together of a larger gathering of the Alumni than on any previous occasion, and this re-union is probably the forerunner of larger Alumni gatherings in the future.

The association has continued the offer of three medals for worthy students in the several collegiate departments, and there is no doubt regarding the wisdom of stimulating in this way the energies of the students. The enrollment of the Alumni Association is now reaching a point where some definite accomplishment can be effected, and each individual should be ready to suggest a desirable project, at the same time to assist in the execution of that object which is most feasible and popular with the Association at large.

The entire institution as viewed from the Alumni standpoint is worthy of the confidence of its patrons and the public. Each of us should feel that every step in advance of that achieved in our day, should give us a feeling of pride, that it is in a manner the result of the successful completion of the work then offered, and should bind us more closely to the work of the present and the broadening of its future.

The officers for the year are: President, W. S. Keech, '93; Vice-President, Grenville Lewis, '97; Secretary-Treasurer, Guy W. Firor, '07; Executive Committee, members at large, Ed. Hall, '66, F. W. Besley, '92.

Graduates and members of the association are requested to keep the Secretary-Treasurer, Guy W. Firor, College Park, Md., informed of any changes in their addresses. Any information concerning the older graduates which will enable the officers to locate and communicate with them will facilitate their efforts and will tend to further the success of the Association.

CANDIDATES FOR DEGREES TO BE CONFERRED IN 1908, WITH SUBJECTS OF THESES.

BACHELOR OF SCIENCE IN AGRICULTURE.

REUBEN BRIGHAM, BRINKLOW, MD.
"The Profitable Production of Winter Lambs in Maryland."

WALTER CAMERON REEDER, RISING SUN, MD.
"Study of the Effects of Feeds Upon the Solidity and Melting Point of the Fats in Butter."

ROBERT HENRY RUFFNER, OPAL, VA.
"Some Investigation of the Milk Supply of Washington City."

BACHELOR OF SCIENCE IN CHEMISTRY.

LEVIN BOWLAND BROUGHTON, POCOMOKE CITY, MD.
"Analysis of Commercial Peppers."
ELWOOD MCAFEE PARADIS, STOCKTON, MD.
"Analysis of Commercial Ammonias."

BACHELOR OF SCIENCE IN CIVIL ENGINEERING.

HARRY CLIFTON BYRD, CRISFIELD, MD.
GROVER CLEVELAND DAY, DUBLIN, MD.
SAMUEL MACLEROY LOWREY, COLGATE, MD.
EUGENE HERMAN PLUMACHER, JR., MARACAIBO, VENEZUELA.
MICHAEL CARMEN PLUMACHER, MARACAIBO, VENEZULA.
NATHANIEL LUFF WARREN, JR., SELBYVILLE, DEL.
"Location of a Highway from Lakeland to the Maryland Agricultural College."
CAESAR SOLARI REVOREDO, LIMA, PERU.
"The Design of a 96-Foot Span Steel Highway Bridge."
CARROLL AMBROSE WARTHEN, KENSINGTON, MD.
ROGER AUSTIN WILSON, CUMBERLAND, MD.
"Design for 75-Foot Span, Warren Girder Highway Bridge."

BACHELOR OF SCIENCE.

URAH WILLIS LONG, SELBYVILLE, DEL.
"The Economic Importance of the Order Hemiptera."

FRANK ERNEST RUMIG, COLLEGE PARK, MD.
"Studies of Plant Disease Resistance."

BACHELOR OF SCIENCE IN HORTICULTURE.

GEORGE GROVER BECKER, BALTIMORE, MD.
"The Effect of the Specific Gravity and Size of the Seed Upon the Resulting Plant."

BARNEY REYBOLD COOPER, KENNEDYVILLE, MD.
"Raising Early Cabbage and Cauliflower—Fall-Grown Plants Compared with Spring Grown."

JOHN WILLIAM FIROR, THURMONT, MD.
"Cross Pollination and Its Effects Upon the Variability of Fruits."

THOMAS BOURNE TURNER MACKALL, MACKALL, MD.
"The Effect of Commercial Fertilizers on Lettuce."

EDWARD INGRAM OSWALD, COLLEGE PARK, MD.
"The Effect of Manure Upon the Vitality of Weed Seeds, Under Barnyard Conditions."

RICHARD LEE SILVESTER, COLLEGE PARK, MD.
"The Effect of Potash Salts on Onions."

WALTER HENRY THOMAS, CROSS ROADS, MD.
"The Propagation of the Apple by Means of Cuttings."

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING.

NORMAN EARLE BRICE, ANNAPOLIS, MD.
WILLIAM ANDERSON SHIPMAN SOMERVILLE, CUMBERLAND, MD.
"Design of a One Hundred and Fifty Horsepower Return Tubular Boiler."

HARRY BENTON HOSHALL, PARKTON, MD.
JOHN PAUL LYSIAS SHAMBERGER, PARKTON, MD.
"The Designing of a Simple, Reciprocating Vertical Engine."

HARRY WILCOX STINSON, COLUMBIA, MD.
"The Design, Construction, Installation, Care and Operation of a 187.5 I. M. P. Heavy Duty, Self-Contained Stationary Engine."

CHARLES WESLEY SYLVESTER, DENTON, MD.
"Plans for a Modern Machine Shop."

MEDALS AWARDED IN 1907.

JOHN POSEY MUDD.
Senior Medal: for highest standing for the entire course; offered by the President. Average 92.5.

MORRIS HENRY ADAMS AND WILLIAM TERRY MAHONEY.
Honorary mention, average over 90.

J. P. SHAMBERGER.
Junior Medal: for highest standing in Junior Year; offered by the President. Average 97.4.

HARRY WOOD LIPPENCOTT.
*Gold Medal for best debater in commencement competition; offered by the Alumni Association.

STANLEY TORNEY VOCKE.
*Gold Medal for best Thesis on Agricultural Science; offered by the Alumni Association.

CHARLES HAMILTON HARPER.
*Gold Medal for best work in Mechanical Engineering Department; offered by the Alumni Association.

JOHN POSEY MUDD.
Honorable mention.

REUBEN BRIGHAM.

Gold Medal for the best essay on "American Citizenship;" offered by the Board of Trustees.

HARRY WOOD LIPPENCOTT.

Schley Prize for best oration, treating Maryland History, delivered on Maryland Day, 1907; founded by Hon. B. H. Warner.

JAMES STANLEY GORSUCH.

William Pinkney Whyte Gold Medal; founded by Hon. Isaac Lobe Straus; for excellence in oratory.

MILITARY ROSTER—CADET BATTALION.

EDWARD LLOYD, MAJOR, U. S. A.

COMMANDANT OF CADETS.

FIELD AND STAFF.

Major B. R. Cooper.
First Lieutenant and Adjutant, R. L. Silvester.
Second Lieutenant and Quartermaster, Reuben Brigham.

NON-COMMISSIONED STAFF.

Sergeant-Major, C. F. Mayer.
Quartermaster-Sergeant, L. O. Jarrell.
Color Sergeant, P. E. Dupuy.

COMPANY A.

U. W. Long, Captain.

W. C. Reeder, First Lieutenant. J. W. Firor, Second Lieutenant.
H. C. Byrd, H. W. Stinson, Additional Third Lieutenants.
A. C. Turner, First Sergeant. J. Q. A. Holloway, Second Sergeant.
J. S. Gorsuch, Third Sergeant. W. R. Maslin, Fourth Sergeant.
H. M. Coster, Fifth Sergeant.
F. J. Maxwell, First Corporal. M. E. Tydings, Second Corporal.
J. P. Grason, Third Corporal. H. M. Walters, Fourth Corporal.

COMPANY B.

J. P. Shamberger, Captain.

W. A. S. Somerville, First Lieutenant. N. L. Warren, Second Lieutenant.
G. G. Becker, Third Lieutenant.
N. E. Brice, E. M. Paradis, Additional Third Liteutenants.
P. E. Burroughs, First Sergeant. G. E. Hamilton, Second Sergeant.
T. D. Jarrell, Third Sergeant. L. J. Hathaway, Fourth Sergeant.
B. D. Spalding, Fifth Sergeant.
H. S. Cobey, First Corporal. H. C. Evans, Second Corporal.
L. G. True, Third Corporal.

COMPANY C.

C. W. Sylvester, Captain.

H. B. Hoshall, First Lieutenant. S. L. Lowrey, Second Lieutenant.
R. A. Wilson, M. Plumacher, Additional Third Lieutenants.
J. F. Allison, First Sergeant. F. H. Dryden, Second Sergeant.
M. E. Choate, Third Sergeant. C. W. Sigler, Fourth Sergeant.
J. E. Haslup, Fifth Sergeant.
T. R. Stanton, First Corporal. E. H. Price, Third Corporal.
W. J. Frere, Second Corporal. E. H. Bounds, Fourth Corporal.

ROSTER OF MATRICULATES.

SESSION 1907-1908.

GRADUATE STUDENTS.

NAME.	POST OFFICE.	COUNTY.
FIROR, G. W.	College Park	Prince George
WALLS, E. P.	Barclay	Queen Anne

SENIOR CLASS.

BECKER, G. G.	Baltimore	*Baltimore City*
BRICE, N. E.	Annapolis	Anne Arundel
BRIGHAM, R.	Brinklow	Montgomery
BROUGHTON, L. B.	Pocomoke City	Worcester
BYRD, H. C.	Crisfield	Somerset
COOPER, B. R.	Worton	Kent
DAY, G. C.	Dublin	Harford
FIROR J. W.	Thurmont	Frederick
HOSHALL, H. B.	Parkton	Baltimore
LONG U. W.	Selbyville	*Delaware*
LOWREY, S. L.	Colgate	Baltimore
MACKALL, T. B.	Mackall	Calvert
PARADIS, E. M.	Stockton	Worcester
PLUMACHER, E. H.	Maracaibo	*Venezuela*
PLUMACHER, M. C.	Maracaibo	*Venezuela*
REEDER, W. C.	Rising Sun	Cecil
RUMIG, F. E.	College Park	Prince George
SHAMBERGER, J. P.	Parkton	Baltimore
SILVESTER, R. L.	College Park	Prince George
SOLARI, C. S.	Lima	*Peru*
SOMERVILLE, W. A. S.	Cumberland	Allegany
STINSON, H. W.	Columbia	Howard
SYLVESTER, C. W.	Denton	Caroline
THOMAS, W. H.	Cross Roads	Charles
WARREN, N. L.	Selbyville	*Delaware*
WARTHEN, C. A.	Kensington	Montgomery
WILSON, R. A.	Cumberland	Allegany

JUNIOR CLASS.

ALLISON, J. M. F.	Washington	*District of Columbia*
BOYLE, W.	Washington	*District of Columbia*
BURROUGHS, P. E.	Croome	Prince George
CORY, E. N.	Takoma Park	*District of Columbia*
COSTER, H. M.	Solomons	Calvert
DRYDEN, F. H. JR.	Pocomoke City	Worcester
DUPUY P. E.	Pasamaya	*Peru*
GILBERT, L. E.	Laurel	Prince George
GORSUCH, J. S.	Fork	Baltimore

NAME.	POST OFFICE.	COUNTY.
GRIFFIN, J. P.	Highland	Howard
HASLUP, J. E.	Savage	Howard
HATHAWAY, L. J.	Easton	Talbot
HOLLOWAY, J. Q. A.	Rosaryville	Prince George
JANER, F.	Baltimore	*Baltimore City*
JARRELL, L. O.	Greensboro	Caroline
JARRELL, T. D.	Greensboro	Caroline
KOENIG, M. JR.	Baltimore	*Baltimore City*
MCENANY R.	Clear Spring	Washington
MASLIN, W. R.	Port Chester	*New York*
MAYER, C. F.	Frostburg	Allegany
SPAULDING, B. D.	Churchville	Harford
TAUSZKY, C. E.	Baltimore	*Baltimore City*
TURNER, A. C.	Sollers	Calvert

SOPHOMORE CLASS.

ADAMS, C.	Takoma Park	*District of Columbia*
ALLEN, H. H.	Towson	Baltimore
ANDREWS, O. R.	Hurlock	Dorchester
BARROWS, P. R.	Berwyn	Prince George
BAUER, J. W.	Havre de Grace	Harford
BERRY R. B.	Laurel	Prince George
BOUNDS, E. H.	Mardella Springs	Wicomico
BREEDEN A. C.	Sollers	Calvert
CARPINTER, R. H.	Washington	*District of Columbia*
COBEY, H. S.	Grayton	Charles
COLE, W. P. JR.	Towson	Baltimore
CRAPSTER, J. O.	Taneytown	Carroll
DOAK, H. D.	Darby	*Pennsylvania*
DONALDSON, J. L.	Berwyn	Prince George
DRACH, C. R.	New Windsor	Carroll
DUCKETT, J. W.	Davidsonville	Anne Arundel
EVANS H. C.	Lonaconing	Allegany
FRERE, W. J.	Tompkinsville	Charles
GORSUCH, V. L.	Mt. Carmel	Baltimore
GRASON, J. P.	Towson	Baltimore
GRAY, S. L.	Nanjemoy	Charles
HAMILTON, G. E.	La Plata	Charles
HARDING, T. S.	Laurel	Prince George
HICKS, C. G.	Cambridge	Dorchester
HOGE, J. H.	Baltimore	*Baltimore City*
KEFAUVER, J. O.	Middletown	Frederick
MARTINEZ, S.	Salvador	*Honduras*
MAXWELL F. J.	Comus	Montgomery
MUNSON, W. C. D.	South Britain	*Connecticut*
OSBOURNE, W. E.	Baltimore	*Baltimore City*
PRICE, E. H.	Washington	*District of Columbia*
ROBERTS, M.	Washington	*District of Columbia*
ROE, L. M.	Wye Mills	Talbot
SAUNDERS, W. S.	Baltimore	*Baltimore City*
STABLER, S. S.	Brighton	Montgomery
STANTON, T. R.	Grantsville	Garrett
STEFFENS, H. L.	Baltimore	*Baltimore City*

NAME.	POST OFFICE.	COUNTY.
STRICKLAND, C. W.	Snow Hill	Worcester
TIMANUS, W. O.	Laurel	Prince George
TRUE, L. G.	Washington	*District of Columbia*
TYDINGS, M. E.	Havre de Grace	Harford
VALUE, B. R.	Pocomoke City	Worcester
WALTERS, H. M.	Pocomoke City	Worcester
WARD, F. R.	Baltimore	*Baltimore City*
WENNER, C. F.	Brunswick	Frederick
WHITE, H. J.	College Park	Prince George
WHITE, J. R.	Poolesville	Montgomery
WHITING, W. W.	Hyattsville	Prince George
WOOLFORD, M. H.	Cambridge	Dorchester

FRESHMAN CLASS.

AIKENHEAD, W. M.	Easton	Talbot
AMAN L. J.	Hyattsville	Prince George
BENSON, J. B.	Buffalo	*New York*
BOSS, E. C.	Washington	*District of Columbia*
BRADSHAW, H. J.	Deal's Island	Somerset
BRASURE, G. C.	Selbyville	*Delaware*
BROOKS, T. R.	Hyattsville	Prince George
BURNS, J. M.	Morgantown	*West Virginia*
BYERS, J. E. T.	Laurel	Prince George
CHURCH, C. B.	Washington	*District of Columbia*
CLARK, N. L.	Laurel	Prince George
DALEY, J.	Baltimore	*Baltimore City*
DAVIDSON T.	Davidsonville	Anne Arundel
DEVILBISS, H. R.	New Windsor	Carroll
DUCKETT, A. B.	Hyattsville	Prince George
FIELDS, J. F.	Hancock	Washington
GAREY, D.	Denton	Caroline
GLASS, D. W.	Baltimore	*Baltimore City*
HOEN, S.	Richmond	*Virginia*
JOVA, J.	Washington	*District of Columbia*
JUMP, W. G.	Chestertown	Kent
KINGHORNE, J. W.	Baltimore	*Baltimore City*
LANKFORD, G. A.	Salisbury	Wicomico
LITTLE P. R.	Funkstown	Washington
LUNN, C. B.	Baltimore	*Baltimore City*
MANGUM, H.	Baltimore	*Baltimore City*
MORLEY, S. C.	Hyattsvile	Prince George
MUDD, E. A.	Cheltenham	Prince George
NEWCOMER, E.	Benevola	Washington
NYDEGGER, W. E.	Elkins	*West Virginia*
OIESEN, E. E.	Baltimore	*Baltimore City*
PADGETT, W. J.	Baltimore	*Baltimore City*
QUIMBY, G. P.	Cordova	Talbot
REDMOND, B. J.	Charleston	*West Virginia*
SEVERE, W. E.	Riverdale	Prince George
SHIPLEY, W. L.	Berwyn	Prince George
SILVESTER, L. M.	Portsmouth	*Virginia*
SIMPSON, R. L.	Dayton	Howard
SMITH, W. C.	Baltimore	*Baltimore City*
SONNENBERG, A. T.	Bladensburg	Prince George

NAME.	POST OFFICE.	COUNTY.
STALEY, L.	Washington	*District of Columbia*
STIFLER, J. R.	Belair	Harford
THOMAS, R. D.	Pomonkey	Charles
THOMSON, H. C.	Hyattsville	Prince George
TIMANUS, B. R.	Laurel	Prince George
TOLSON R. L.	Colesville	Montgomery
TOWERS, I. L.	Chevy Chase	Montgomery
TRIMBLE, V.	Mt. Savage	Allegany
TWADDELL, C. E.	Philadelphia	*Pennsylvania*
WALTERS, W. H.	Pocomoke City	Worcester
WHITE, F. M.	Dickerson	Montgomery
WHITE, W. H.	College Park	Prince George

SECOND-YEAR AGRICULTURAL.

CHOATE, M. E.	Randallstown	Baltimore
GOLDEN, C. J.	Swanton	Garrett
SIGLER, C. W.	Ridgely	Caroline
SMITH, I. A.	Ashton	Montgomery

FIRST-YEAR AGRICULTURAL.

CARAZA, C. M.	San Jose	*Costa Rica*
HOEN, R.	Richmond	*Virginia*
LANGDON, H. B.	Charlestown	*West Virginia*
MALCOLM, D.	Washington	*District of Columbia*
SAN ROMANO, C.	Lima	*Peru*

PREPARATORY CLASS.

BELL, G. M.	Berlin	Worcester
BOECKNER, E. S.	Baltimore	*Baltimore City*
CALHOUN, R. C.	McKeesport	*Pennsylvania*
DENNIS, S. C.	Ocean City	Worcester
EMRICH, P. L.	Washington	*District of Columbia*
EVANS, B. H.	Lonaconing	Allegany
JOHNSON, C. W.	Baltimore	*Baltimore City*
KELLY, O.	Baltimore	*Baltimore City*
KLINGLER, G. P.	Washington	*District of Columbia*
LONG, N.	California	St. Mary
LYON, T. A.	Hyattsville	Prince George
MORRIS, J. C.	Riverdale	Prince George
NYDEGGER, W. E.	Elkins	*West Virginia*
OLIVER, S.	Brookline	*Massachusetts*
O'NEILL, H. H.	Bladensburg	Prince George
POSEY, G. B.	Riverside	Charles
ROBINSON, S. L.	Cumberland	Allegany
ROTH, I. H.	McKeesport	*Pennsylvania*
SCHEEWE, W. R.	Baltimore	*Baltimore City*
SEIBOLD, G. C.	Baltimore	*Baltimore City*
SHEMA, E.	Highlandtown	Baltimore
SHIPLEY, S. G.	Baltimore	*Baltimore City*
SMITH, R. R.	Wakefield	Carroll
SONNENBERG, H.	Bladensburg	Prince George
SPANGLER, G. M.	Washington	*District of Columbia*

NAME.	POST OFFICE.	COUNTY.
STANTON, A. C.	Grantsville	Garrett
THOMPSON, S.	Washington	*District of Columbia*
TWIGG, H. L.	Twiggtown	Allegany
WALTER R.	Buffalo	*New York*
WILBURN, R.	Baltimore	*Baltimore City*
WILLIS, H. D.	Hyattsville	Prince George

SPECIAL STUDENTS—JUNIOR AND SENIOR WORK.

OSWALD, E. I.	Chewsville	Washington
RUFFNER, R. H.	Opal	*Virginia*

SPECIAL STUDENTS TAKING PARTIAL COURSE.

LOWE, R. L.	Baltimore	*Baltimore City*

SPECIAL STUDENTS TAKING ELEMENTARY WORK.

ARRANGO, A. A.	Camagney	*Cuba*
BOZA, J.	Ica	*Peru*
BOZA, O.	Ica	*Peru*
CASTRO, P. L.	Caborojo	*Porto Rico*
MARMOL, A.	Ica	*Peru*
MARMOL, F.	Ica	*Peru*
OLIVARES, D.	Maracaibo	*Venezuela*
SAAVEDRA, J.	Pocosmaya	*Peru*
SERVANO, M.	Cucuta	*Columbia*
TANGUIS, L.	Ica	*Peru*

TEN-WEEKS WINTER COURSE.

BAKER, C. H.	Mt. Lake Park	Garrett
COFFMAN, J. D.	Lydia	Washington
COLLIER, C. S.	Easton	Talbot
DALTON, J. C.	White Hall	Baltimore
DICKARD, J. C.	Baltimore	*Baltimore City*
ELLIS, W. A.	Laurel	Prince George
JACOBS, A. W.	Havre de Grace	Harford

INSPECTOR'S CLASS.

BEEGHLY, A. O.	Keyser	Garrett
BARNUM, E. G.	Girdletree	Worcester
BROWN, C. C.	Chestertown	Kent
CARROLL, W. C.	College Park	Prince George
CARPENTER, C. M.	Riverdale	Prince George
DAVIS, F.	Street	Harford
ENGLISH, J. D.	Frederick	Frederick
GRAHAM, H. W.	Tyaskin	Wicomico
GRIFFIN, S.	Denton	Caroline
HARDT, J. T.	Elioak	Howard
HERR, R. E.	Boonsboro	Washington
HUSS, F.	Ammondale	Prince George
KLEIN, C. E.	Frederick	Frederick
KRUMBINE, H. S.	Gilpen	Allegany

NAME.	POST OFFICE.	COUNTY.
MacMillan, A. M.	Riverdale	Prince George
Marlow, R. E.	Muirkirk	Prince George
Murdock, W. A.	Hagerstown	Washington
Pry, T. J.	Keedysville	Washington
Swisher, C.	Cumberland	Allegany
Walker, W. I.	Chestertown	Kent
Walsh, J.	Westminster	Carroll
Warthen, G. F.	Loveville	St. Mary
Wilkins, A.	Rehobeth	Somerset
Woodward, C. H.	Hyattsville	Prince George
Yingling, F. G.	Reisterstown	Baltimore

SUMMARY OF STUDENTS.

Graduate Students	4
Senior Class	27
Junior Class	23
Sophomore Class	49
Freshman Class	52
Second Year Agricultural	4
First Year Agricultural	5
Preparatory Students	31
Ten-week Course	7
Special Students	13
Inspectors' Class	25
Total	240

LIST OF PRESIDENTS AT THE MARYLAND AGRICULTURAL COLLEGE.

1.	Prof. Benjamin Hallowell,	President of the Faculty	1859—1860
2.	Rev. J. W. Scott	" " " "	1860—1860
3.	Prof. Colby	" " " "	1860—1861
4.	Prof. Henry Onderdonk	" " " "	1861—1864
5.	Prof. N. B. Worthington	" " " "	1864—1867
6.	Prof. C. L. C. Minor	President of College	1867—1868
7.	Admiral Franklin Buchanan	" " " "	1868—1869
8.	Prof. Samuel Regester	" " " "	1869—1873
9.	Gen. Samuel Jones	" " " "	1873—1875
10.	Capt. W. H. Parker	" " " "	1875—1883
11.	Gen. Augustus Smith	" " " "	1883—1887
12.	Allen Dodge, Esq., Pro Tem.	" " " "	1887—1888
13.	Major Henry E. Alvord	" " " "	1888—1892
14.	R. W. Silvester, LL. D.	" " " "	1892——

LIST OF GRADUATES WITH DEGREES AND ADDRESSES.

The following members of the various graduating classes have been located. Any information leading to further additions and addresses and occupations of Alumni will be gratefully received.

CLASS OF '62.

*Franklin, J., B. S.
Sands, W. B., A. B., Lake Roland, Md.

CLASS OF '63.

*Calvert, C. B., A. B.

CLASS OF '64.

Hall, D., A. M.
Todd, W. B., B. S.

CLASS OF '66.

Hall, E., A. B., Millersville, Md.
*Roberts, L., Ph. B.
Waters, F., A. B., West River, Md.

CLASS OF '71.

Soper, F. A., A. B. (M. A. '74), Baltimore, Md.

CLASS OF '73.

*Henry, R. S., A. B. (M. A. '75).
Miller, O., A. B. (M. A. '75).
Regester, A., A. B.
Worthington, D., A. B.
Worthington, W., A. B.

CLASS OF '74.

Coffren, J. H., B. S. (M. A. '77).
Davis, H. M., A. B. (M. A. '77), Poolesville, Md.
Griffith, L. A., A. B. (M. A. '77), Upper Marlboro, Md.
Norwood, F. C., A. B. (M. A. '77), Frederick, Md.

CLASS OF '75.

Gray, J. B., A. B. (M. A. '78), Prince Frederick, Md.
Hyde, J. F. B., A. B., 1803 Bolton Street, Baltimore, Md.
Lerch, C. E., B. S., 110-114 Hanover Street, Baltimore, Md.
Miller, L., B. S., El Paso, Texas.

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*Deceased.

CLASS OF '76.

Blair, W. J., B. S. (M. S., '79), Custom House, Baltimore, Md.
Thomas, T. H., B. S., Maddox, Md.
*Worthington, J. L., B. S.

CLASS OF '77.

*Beall, R. R., B. S.
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